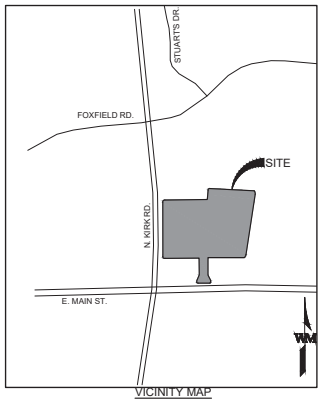
CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT

PRELIMINARY ENGINEERING PLANS

FOX HAVEN SQUARE

502 N. KIRK RD.
ST. CHARLES, IL 60174



VICINITY MAP
SCALE: N.T.S.

SHEET INDEX

SHEET NUMBER	Sheet Description
1	COVER SHEET
2	GENERAL NOTES
3	GENERAL NOTES
4	EXISTING CONDITIONS & DEMOLITION
5	PRELIMINARY SITE PLAN
6	PRELIMINARY SITE PLAN
7	PRELIMINARY GRADING PLAN
8	PRELIMINARY EROSION CONTROL
9	PRELIMINARY DRAINAGE PLAN
10	PRELIMINARY UTILITY PLAN

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PROJECT BENCHMARK

TBM #1	TBM #2
NORTHING: 1914551.22'	NORTHING: 1914454.48'
EASTING: 1000550.93'	EASTING: 1000115.86'
ELEVATION: 782.95'	ELEVATION: 782.82'
CF: 0.99994308	CF: 0.99994308

VALUES SHOWN HEREON ARE FROM NGS OPUS SOLUTION REPORTS GENERATED FROM STATIC GPS OBSERVATIONS, PREFORMED ON BOTH TEMPORARY BENCHMARKS.
DATE OF OBSERVATION: 10/24/2023
HORIZONTAL DATUM: SPC83 (1201 IL E)
VERTICAL DATUM: NAVD88 (GEOID18)

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE BASED ON STATE PLANE COORDINATES (1201 IL E), AS DETAILED IN NGS OPUS SOLUTION REPORTS FOR TBM #1 & TBM #2.

LEGAL DESCRIPTION

THE FOLLOWING LOT LOCATED IN ST. CHARLES, KANE COUNTY, ILLINOIS:

PARCEL 1:

LOT 4 IN STUART'S CROSSING RETAIL, BEING A SUBDIVISION OF PART OF THE NORTHWEST ¼ OF SECTION 25, TOWNSHIP 40 NORTH, RANGE 8, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT RECORDED SEPTEMBER 15,1998 AS DOCUMENT 98K083752, IN KANE COUNTY, ILLINOIS.

PARCEL 2:
RIGHTS FOR BENEFIT OF PARCEL 1 CREATED BY AND GRANTED IN THE CONSTRUCTION, OPERATION AND RECIPROCAL EASEMENT AGREEMENT ("REA") RECORDED SEPTEMBER 11, 1998 AS DOCUMENT 98K082487 FOR THE PURPOSE OF (1) PARKING OF PASSENGER VEHICLES (2) VEHICULAR, AND PEDESTRIAN PASSAGE (3) CONNECTION WITH AND USE OF WATER, SANITARY AND STORM WATER, TELEPHONE, ELECTRIC LINES, CONDUITS, TRANSMISSION AND OTHER SIMILAR UTILITY FACILITIES AND (4) DRAINAGE OF STORM WATER.

SURVEY INFORMATION

THESE PLANS AND THE ABOVE INFORMATION ARE BASED ON A PRELIMINARY SURVEY BY AMERICAN SURVEYING & MAPPING, INC. PROVIDED TO WARE MALCOMB ON 11/02/2023.

811 Know what's below. Call before you dig.

WARE MALCOMB assumes no responsibility for utility locations. The utilities shown on this drawing have been plotted from the best available information. It is, however, the contractor's responsibility to field verify the location of all utilities prior to the commencement of any construction.

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BFV	BACK FLOW VALVE
CF	CURB FACE
CL/℄	CENTERLINE
CO	CLEANOUT
DF	DEEPENED FOOTING
DIP	DUCTILE IRON PIPE
EG	EXISTING GRADE
EL	ELEVATION
EOA	EDGE OF ASPHALT
ESMT	EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FF/FFE	FINISH FLOOR ELEVATION
FG	FINISHED GRADE
FGW	FINISH GRADE AT WALL
FL/℄	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
GBW	GRADE AT BOTTOM OF WALL
GTW	GRADE AT TOP OF WALL
GM	GAS METER
GV	GAS VALVE
HP	HIGH POINT
LP	LOW POINT
INV	INVERT
LF	LINEAR FEET
ME	MATCH EXISTING
MH	MANHOLE
NG	NATURAL GROUND
OC	ON CENTER
PB	PULL BOX
PCC	PORTLAND CEMENT CONCRETE
PL/℄	PROPERTY LINE
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
(RAD)	RADIAL BEARING
RCP	REINFORCED CONCRETE PIPE
R/W /ROW	RIGHT OF WAY
SD/STRM	STORM DRAIN
STA	STATION
SS/SAN	SANITARY SEWER
TG	TOP OF GRATE
SW	SIDE WALK
TBC	TOP BACK OF CURB
TFI	TOP FACE OF INLET
TC	TOP OF CURB
TOP	TOP OF PIPE
TOW	TOP OF WALL
TYP.	TYPICAL
VIF	VERIFY IN FIELD
WM	WATER METER
WSEL	WATER SURFACE ELEVATION
WV	WATER VALVE

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FOR AND ON BEHALF OF WARE MALCOMB

FOX HAVEN SQUARE
PRELIMINARY ENGINEERING
502 N KIRK RD.
ST. CHARLES, IL 60174

COVER SHEET

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

SHEET
C1.0
Sheet 1 of 10

CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT

CITY OF ST. CHARLES STORM SEWER SYSTEM NOTES

A: DESIGN REQUIREMENTS:

1) AUGER: CONDITIONS (SUCH AS A RECENTLY RECONSTRUCTED ROADWAY OR TRAFFIC IMPACTS) MAY WARRANT THAT THE CITY REQUIRE ROADWAY CROSSINGS TO BE AUGERED. WHEN REQUIRED, STEEL CASING AND "CASCADE" SPACERS (OR APPROVED EQUAL) SHALL BE UTILIZED. FOLLOWING COMPLETION OF THE AUGER, THE ENDS SHALL BE BLOCKED AND MORTARED SHUT (REFER TO CITY CASING PIPE DETAIL).

2) CATCH BASINS: CATCH BASINS SHALL CONSIST OF 4' MINIMUM INTERIOR DIAMETER REINFORCED CONCRETE STRUCTURES WITH A 3' SUMP (REFER TO CITY CATCH BASIN DETAIL).

3) COVER DEPTH: ALL STORM SEWER AND SUMP LINES MUST HAVE A MINIMUM COVER OF 2'.

22) VIDEO NOTE ON ALL PLANS: ENGINEERING PLANS MUST CONTAIN THE FOLLOWING NOTE: "A CURRENT COLOR VIDEO RECORD AND A WRITTEN TRANSCRIPTION OF THE INTERNAL INSPECTION OF THE NEWLY CONSTRUCTED STORM AND SANITARY SEWER SYSTEMS SHALL BE SUBMITTED PRIOR TO REFUNDING OF SITE IMPROVEMENT ESCROW RETENTION MONIES BY THE CITY OF ST CHARLES. ALL PUBLIC MAINS SHALL BE TELEVISED AND DIGITALLY RECORDED. THE CONTRACTOR MUST ROTATE THE LENS OF THE CAMERA TO LOOK AT ALL SERVICES/CONNECTIONS. THE SERVICE CONNECTIONS MUST BE NOTED IN THE TELEVISION REPORT. WHEN THE PROPOSED SEWER SYSTEM CONNECTS TO AN EXISTING SEWER SYSTEM, THE EXISTING SEWER MUST ALSO BE TELEVISED AND REPORTED. THE CONTRACTOR SHALL COORDINATE THE TELEVISING OF EXISTING CONTIGUOUS SEWERS WITH THE CITY OF ST CHARLES. ALL LINES SHALL BE FLUSHED AND CLEANED PRIOR TO TELEVISING."

4) DISCONNECTION OF EXISTING SERVICES: SHALL BE BY MEANS OF CUTTING OUT EXISTING WYE OR TEE AND REPLACING WITH A STRAIGHT PIECE OF EQUAL SIZE PIPE AND MAKING THE FINAL CONNECTION WITH "NON-SHEAR"COUPLINGS. DISCONNECTION OF ALL SERVICES MUST BE PERFORMED PRIOR TO THE DEMOLITION OF AN EXISTING STRUCTURE.

5) FLARED END SECTIONS: ALL FLARED END SECTIONS GREATER THAN OR EQUAL TO 12" SHALL HAVE A REMOVABLE GRATE SYSTEM. GRATES SHALL BE GALVANIZED STEEL.

6) EXTENSION OF SEWER SYSTEM: THE STORM SEWER MUST BE EXTENDED TO THE LIMITS OF THE SUBDIVISION OR LOT AND SHALL BE SIZED TO ACCEPT ALL TRIBUTARY AREAS.

7) CAPACITY CALCULATIONS: PROVIDE CALCULATIONS TO SUBSTANTIATE THE AVAILABLE CAPACITY OF THE EXISTING RECEIVING STORM SEWER/STREAM IN LIGHT OF THE DESIGN DISCHARGE FROM THE PROPOSED DEVELOPMENT. NOTE ON ALL PLANS WHICH SEWER LINES ARE TO BE PUBLIC AND PRIVATE. ALL PROPOSED STORM SEWER SYSTEMS SHALL BE DESIGNED PER THE KANE COUNTY STORMWATER ORDINANCE AS ADOPTED AND MODIFIED BY THE CITY OF ST. CHARLES.

8) CONNECTING TO AN EXISTING SEWER: ALL CONNECTIONS TO EXISTING STORM SEWERS SHALL BE AT A MANHOLE, EXCEPT FOR PERMITTING SUMP PUMP CONNECTIONS. SUMP PUMP CONNECTIONS SHALL BE MADE UTILIZING A WYE OR TEE-WYE FITTING FOR ALL SEWER MAINS 12" IN DIAMETER OR LESS. WHEN CONNECTING TO AN EXISTING SEWER MAIN THAT IS OVER 12" DIAMETER, ONE OF THE FOLLOWING METHODS SHALL BE USED:

a. USING PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTINGS. USE NON-SHEAR COUPLINGS UTILIZING SHEAR RINGS AND NON-SHEAR COUPLINGS SHALL HAVE THE LENGTH OF BOOT APPROXIMATELY EQUAL TO THE PIPE DIAMETER. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION. NO CUT-IN CONNECTION, MADE BY BREAKING OR CUTTING A HOLE IN THE MAIN AND INSERTING THE SPIGOT END OF AN ORDINARY SEWER PIPE SHALL BE PERMITTED.
b. CIRCULAR, SAW-CUT OF SEWER MAIN WITH PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL MUST BE ENCASED IN CONCRETE FLOWABLE FILL.

9) FRAME & GRATE: FRAMES AND GRATES SHALL BE PROVIDED AS APPROPRIATE FOR THE STRUCTURE LOCATION (I.E.: DEPRESSED CURB, BARRIER CURB, OVERFLOW ROUTE, REAR YARD). ALL GRATES TO BE LOCATED NEAR A PAVED SURFACE SHALL BE "BICYCLE SAFE."

10) INLETS: INLETS SHALL CONSIST OF A TWO (2) FOOT MINIMUM INTERIOR DIAMETER REINFORCED CONCRETE STRUCTURE. INLETS SHALL BE PLACED AT THE SAG OF VERTICAL CURVES IN ROADWAYS, AT LOW POINTS IN PARKING AREAS, AND AT OTHER LOCATIONS AS NECESSARY TO MINIMIZE STORMWATER PONDING AND/OR FLOW ACROSS ROADWAYS OR INTERSECTIONS. INLET SPACING SHALL BE BASED ON DESIGN CALCULATIONS AND AS REQUIRED PER THE IDOT DRAINAGE MANUAL AND KANE COUNTY STORMWATER ORDINANCE.

11) RELEASE STRUCTURE / RESTRICTOR: THE RELEASE STRUCTURE SHALL BE OF A WEIR WALL ORIFICE DESIGN (REFER TO OVERFLOW WEIR STRUCTURE DETAIL) OR AS APPROVED BY THE CITY OF ST. CHARLES.

12) UNDERGROUND STORAGE SYSTEM
A. UNDERGROUND CHAMBERS MUST BE LARGE ENOUGH TO ALLOW THE CHAMBER TO BE MANUALLY CLEANED.
B. ACCESS POINTS FOR INGRESS AND VENTILATION PURPOSES ARE TO BE PROVIDED IN THE CHAMBER AT A MAXIMUM SPACING OF 100 FEET AND AT THE ENDS OF THE CHAMBER.
C. UNDERGROUND STORAGE CHAMBERS ARE TO BE CLEARLY LABELED ON THE ENGINEERING PLANS AS "PRIVATE STORM WATER STORAGE FACILITY." THESE CHAMBERS ARE TO BE MAINTAINED BY THE DEVELOPER UNTIL AN OWNER'S ASSOCIATION IS ESTABLISHED.
D. POURED IN PLACE REINFORCED CONCRETE CHAMBER DESIGNS MUST BE SIGNED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER (SE). PRECAST CHAMBERS MUST HAVE SHOP DRAWINGS APPROVED BY A LICENSED SE.
E. ALL REINFORCEMENT STEEL SHALL BE EPOXY COATED. ALL CONCRETE SHALL BE TREATED WITH A PROTECTIVE CONCRETE COATING ON THE INTERIOR AND EXTERIOR OF THE CHAMBER.
F. FOR PRECAST CONCRETE CONSTRUCTION, GEO-TEXTILE FABRIC MUST BE PLACED OVER THE TOP OF THE STRUCTURE, AND ALL JOINTS MUST BE GROUTED.
G. A MINIMUM OF 12 INCHES OF TOPSOIL MUST BE PLACED TO COVER THE UNDERGROUND STORAGE FACILITY WHEN CONSTRUCTED UNDER GRASS/LANDSCAPED AREAS.
H. ALL TRENCHES PENETRATING THE UNDERGROUND STORAGE SHALL INCLUDE A BENTONITE CUT OFF WALL.

CITY OF ST. CHARLES NOTES:

1. A CURRENT COLOR VIDEO RECORD AND A WRITTEN TRANSCRIPTION OF THE INTERNAL INSPECTION OF THE NEWLY CONSTRUCTED STORM AND SANITARY SEWER SYSTEMS SHALL BE SUBMITTED PRIOR TO REFUNDING OF SITE IMPROVEMENT ESCROW RETENTION MONIES BY THE CITY OF ST CHARLES. ALL PUBLIC MAINS SHALL BE TELEVISED AND DIGITALLY RECORDED. THE CONTRACTOR MUST ROTATE THE LENS OF THE CAMERA TO LOOK AT ALL SERVICES/CONNECTIONS. THE SERVICE CONNECTIONS MUST BE NOTED IN THE TELEVISION REPORT. WHEN THE PROPOSED SEWER SYSTEM CONNECTS TO AN EXISTING SEWER SYSTEM, THE EXISTING SEWER MUST ALSO BE TELEVISED AND REPORTED. THE CONTRACTOR SHALL COORDINATE THE TELEVISING OF EXISTING CONTIGUOUS SEWERS WITH THE CITY OF ST CHARLES. ALL LINES SHALL BE FLUSHED AND CLEANED PRIOR TO TELEVISING.

13) SEPARATION REQUIREMENTS: SEPARATION REQUIREMENTS SHALL FOLLOW THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS AND THE TEN STATES STANDARDS.

14) SEWER PIPE, MINIMUM SIZE: PUBLIC SEWER SHALL HAVE A MINIMUM DIAMETER OF 10" FOR THE FIRST "RUN" OF PIPE, 12" MINIMUM FOR ALL OTHER PIPE RUNS. DESIGN CALCULATIONS, WHEN REQUIRED, MAY DICTATE THAT LARGER PIPE SIZES ARE REQUIRED.

15) SLOPE: SLOPES SHALL BE DESIGNED TO PROVIDE A MINIMUM "FLOWING FULL" PIPE VELOCITY OF 3 FPS AND MAXIMUM VELOCITY OF 10 FPS.

16) STRUCTURE SIZING: MANHOLES / CATCH BASINS SIZING SHALL MEET IDOT DRAINAGE MANUAL REQUIREMENTS. MANHOLES AND CATCH BASINS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 4' FOR SEWER PIPE 18" OR LESS IN DIAMETER, 5' FOR SEWER PIPE 21" TO 48" IN DIAMETER. PIPES LARGER THAN 48" IN DIAMETER WILL REQUIRE ENGINEERED MANHOLE DESIGN (REFER TO STANDARD MANHOLE AND CATCH BASIN DETAILS.)

STRUCTURES WITH MULTIPLE PIPES MAY REQUIRE LARGER MANHOLES. THE CITY MAY REQUIRE ENGINEERING DESIGN OF MANHOLES TO ENSURE ADEQUATE SIZING.

STRUCTURE SPACING: MANHOLES / CATCH BASINS SPACING SHALL MEET IDOT DRAINAGE MANUAL REQUIREMENTS.

17) SUMP LINES: DOMESTIC SUMP SERVICES SHALL BE CONSTRUCTED OF PVC SDR 26 WITH A MINIMUM DIAMETER OF 6".

SUMP LINES SHALL BE CONSTRUCTED FOR ALL BUILDABLE LOTS AND SHALL BE EXTENDED TO THE RIGHT-OF-WAYOR EASEMENT LIMITS. ALL CONNECTIONS TO THE PUBLIC MAIN SHALL BE AT A MANHOLE OR AS APPROVED BY THE PUBLIC WORKS DEPARTMENT (SEE SECTION 9: CONNECTING TO AN EXISTING SEWER.) ONCE INSTALLED, ALL SERVICES EXTENDING TO THE CITY RIGHT-OF-WAY LIMITS SHALL BE CAPPED AND LOCATED UTILIZING A 2" X 4" WOODEN STAKE PAINTED GREEN.

23) TRENCH BACKFILL: ALL UTILITY AND SERVICE TRENCHES WITHIN THREE FEET OF PAVED SURFACES, OR AT A DISTANCE SPECIFIED BY THE ENGINEER, SHALL BE BACKFILLED WITH CA-7 (VIRGIN CRUSHED LIMESTONE), MECHANICALLY COMPACTED IN ONE-FOOT LIFTS TO 95% PROCTOR DENSITY.

FLOWABLE FILL: THE CITY MAY APPROVE OR REQUIRE THE USE OF FLOWABLE FILL AS BACKFILL UNDER EXISTING PAVEMENTS. FLOWABLE FILL SHALL MEET IDOT STANDARDS FOR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MIXTURE #1.

18) UNDERDRAINS: UNDERDRAINS WILL BE REQUIRED UNDER CURBS AT THE BOTTOM OF ALL ROADWAY SAGS. UNDERDRAINS SHALL EXTEND 50 FEET ON EACH SIDE OF THE INLET. UNDERDRAINS SHALL BE PERFORATED POLYETHYLENE PIPE. THE UNDERDRAIN SHALL BE ENCASED IN GRAVEL TRENCH WITH NO FINES, AND A GEO-TEXTILEFABRIC SHALL BE USED TO LIMIT SEDIMENTATION IN THE PIPE (REFER TO STANDARD "PIPE UNDERDRAIN" DETAIL).

CULVERTS: CULVERT PIPE DESIGNS SHALL BE IN ACCORDANCE WITH THE IDOT DRAINAGE MANUAL. PUBLICLY OWNED CULVERT PIPES SHALL BE PVC FOR PIPES LESS THAN 15" IN DIAMETER OR RCP FOR PIPES EQUAL TO 15" OR LARGER IN DIAMETER.

19) GPS LOCATION OF UTILITIES: THE FOLLOWING SHALL BE GPS LOCATED IN COORDINATION WITH THE CITY:

STORM INLETS, MANHOLES, CATCH BASINS, FLARED-END SECTIONS, AS WELL AS ANY WYES, TEES, CLEANOUTS AND SERVICE STUBS. GPS LOCATION SHALL BE COMPLETED PRIOR TO BACKFILLING ALL WYES, TEES AND STUBS.

CITY OF ST. CHARLES SANITARY SEWER SYSTEM NOTES

A: DESIGN REQUIREMENTS:

1) AUGER: CONDITIONS (SUCH AS A RECENTLY RECONSTRUCTED ROADWAY OR TRAFFIC IMPACTS) MAY WARRANT THAT THE CITY REQUIRE ROADWAY CROSSINGS TO BE AUGERED. WHEN REQUIRED, STEEL CASING AND SPACERS SHALL BE UTILIZED. FOLLOWING COMPLETION OF THE AUGER, THE ENDS SHALL BE BLOCKED AND MORTARED SHUT (REFER TO CITY CASING PIPE DETAIL).

2) COVER DEPTH: ALL SANITARY SEWER AND SERVICES MUST HAVE A MINIMUM COVER OF FOUR (4) FEET.

3) CALCULATIONS: PROVIDE POPULATION EQUIVALENT (PE) CALCULATIONS TO SUBSTANTIATE THE AVAILABLE CAPACITY OF THE RECEIVING SEWER.

4) DROP CONNECTIONS: DROP CONNECTIONS WILL BE REQUIRED FOR ALL MANHOLE CONNECTIONS WITH A PIPE INVERT HIGHER THAN ONE (1) FOOT ABOVE THE FLOWLINE OF THE MANHOLE. DROP CONNECTIONS WILL ONLY BE ALLOWED WHEN SITE CONDITIONS DICTATE THE NEED TO CONSTRUCT A DROP STRUCTURE. EXTERIOR DROP CONNECTIONS ARE PREFERRED. INTERIOR DROP CONNECTIONS MAY BE PERMITTED AT THE DISCRETION OF THE CITY (REFER TO CITY DROP MANHOLE DETAIL).

5) MANHOLE SPACING: MANHOLES SHALL BE PROVIDED AT:
• 400' MAXIMUM INTERVALS.
• ALL CHANGES IN PIPE DIAMETER, MATERIAL, GRADE OR HORIZONTAL ALIGNMENT.

6) MANHOLE SIZING: SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM INSIDE DIAMETER OF FOUR (4) FEET (REFER TO CITY SANITARY MANHOLE DETAIL).

7) SEPARATION REQUIREMENTS: SEPARATION REQUIREMENTS SHALL FOLLOW THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS AND THE TEN STATES STANDARDS.

8) SERVICES, DOMESTIC: DOMESTIC SANITARY SERVICES SHALL BE CONSTRUCTED OF PVC SDR 26 WITH A MINIMUM DIAMETER OF 6". ALL DOMESTIC SERVICES SHALL CONNECT TO THE PUBLIC SEWER WITH A WYE FITTING. A CLEANOUT SHALL BE INSTALLED WITHIN 10 FEET OF THE STRUCTURE.

9) SERVICES, INDUSTRIAL & COMMERCIAL: INDUSTRIAL AND COMMERCIAL SANITARY SERVICES SHALL BE CONSTRUCTED OF PVC SDR 26 OR 21, WITH A MINIMUM DIAMETER OF 6". ALL INDUSTRIAL AND COMMERCIAL SERVICES SHALL CONNECT TO THE PUBLIC SEWER AT A MANHOLE. AN INSPECTION MANHOLE SHALL BE PROVIDED WITHIN 10 FEET OF THE STRUCTURE (REFER TO MANHOLE DETAILS FOR SERVICE CONNECTIONS).

10) SEWER PIPE, MATERIALS (GRAVITY): SANITARY SEWER SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS:

DEPTH LESS THAN 20': PVC SDR 26

DEPTH GREATER THAN 20': PVC SDR 21 OR DR 18. OTHER PIPE TYPES MAY BE APPROVED BY THE PUBLIC WORKS DEPARTMENT AS SPECIAL CIRCUMSTANCES WARRANT.

11) GRAVITY SEWER PIPE SIZE AND VELOCITY REQUIREMENTS: PUBLIC SEWER MUST HAVE A MINIMUM DIAMETER OF 8", AND MUST PROVIDE A MINIMUM SELF-CLEANING VELOCITY OF 2 FPS, NOT TO EXCEED 10 FPS.

12) FORCE MAIN REQUIREMENTS: SANITARY SEWER FORCE MAIN SHALL CONFORM TO THE FOLLOWING:
i) PIPE SIZE AND VELOCITY REQUIREMENTS: 6" MINIMUM DIAMETER. SMALLER DIAMETERS APPROVED BY PUBLIC WORKS DEPARTMENT AS SPECIAL CIRCUMSTANCES WARRANT.
ii) MATERIAL REQUIREMENTS: PIPE SHALL BE PVC SDR 21 WITH TRACING WIRES.
iii) CLEAN-OUTS: REQUIRED AT ALL VERTICAL AND/OR HORIZONTAL BENDS, WITH A MAXIMUM SPACING OF 400'. CLEANOUTS SHALL BE INSTALLED VIA THE USE OF A "WYE" CONNECTION WITH A CAP AT THE TOP OF THE CLEANOUT, AND BE CONSTRUCTED WITHIN A MANHOLE. SEE CITY DETAIL.
iv) AIR/RELEASE VALVES: SHALL BE LOCATED AT ALL HIGH POINTS AND BE INDEPENDENT OF CLEANOUTS.

13) TRENCH BACKFILL: ALL UTILITY AND SERVICE TRENCHES WITHIN THREE FEET OF PAVED SURFACES SHALL BE BACKFILLED WITH CA-7 (VIRGIN CRUSHED LIMESTONE), MECHANICALLY COMPACTED IN ONE-FOOT LIFTS TO 95% PROCTOR DENSITY.

FLOWABLE FILL: THE CITY MAY APPROVE OR REQUIRE THE USE OF FLOWABLE FILL AS BACKFILL UNDER EXISTING PAVEMENTS. FLOWABLE FILL SHALL MEET IDOT STANDARDS FOR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MIXTURE #1.

14) LIFT STATION: LIFT STATIONS WILL BE PERMITTED ONLY WHERE SITE CONDITIONS DO NOT ALLOW FOR THE CONSTRUCTION OF A FUNCTIONAL GRAVITY SEWAGE COLLECTION SYSTEM. WHERE LIFT STATIONS ARE PERMITTED, THE FOLLOWING CRITERIA SHALL BE MET:
i) A LIFT STATION DESIGN REPORT SHALL BE SUBMITTED FOR REVIEW AND APPROVAL (CONTACT THE CITY OF ST CHARLES FOR SAMPLE REPORTS AND/OR ADDITIONAL INFORMATION).
ii) A COMPLETE SET OF SHOP DRAWINGS AND PRODUCT SPECIFICATION INFORMATION (I.E.: GENERATOR, PUMP, LIFT STATION...) SHALL BE PROVIDED TO THE CITY FOR REVIEW AND APPROVAL.
iii) A DETAILED PLAN DEPICTING THE PROPOSED LAYOUT OF THE LIFT STATION, INCLUDING THE LOCATION OF THE GENERATOR, CONTROL PANEL, WET AND DRY WELLS, BYPASS VALVES WITH QUICK CONNECTS, ACCESS DRIVE, FENCING, LIGHTING AND LANDSCAPE FEATURES SHALL BE SUBMITTED FOR REVIEW.
iv) A NATURAL GAS-POWERED EMERGENCY GENERATOR SHALL BE PROVIDED.
vi) A COMMUNICATION CONNECTION TO THE MAIN SEWAGE TREATMENT PLANT ALARM SYSTEM SHALL BE PROVIDED, PREFERRED METHOD IS CITY OWNED FIBER NETWORK.
vii) A DEDICATED PARKING AREA AND ACCESS DRIVE CONSISTING OF HEAVY-DUTY PAVED ASPHALT (SN = 3.0) SHALL BE PROVIDED TO THE CITY.
viii) PROVIDE A 4' DIAMETER GRAVITY SEWER MANHOLE WITHIN 15' UPSTREAM OF WET WELLS.

15) EXTENSION OF SEWER SYSTEM: SANITARY SEWER SYSTEM MUST BE EXTENDED TO THE LIMIT OF THE DEVELOPMENT. NOTE ON PLANS WHICH SEWER LINES ARE TO BE PUBLIC AND PRIVATE. SANITARY SEWERS SHALL BE DESIGNED TO ACCEPT ALL EXISTING AND FUTURE DEMAND BASED ON THE FULLY DEVELOPED STATE UNDER PRESENT ZONING AND THE CITY'S COMPREHENSIVE PLAN.

16) DISCONNECTION OF EXISTING SERVICES: DISCONNECTION OF EXISTING SERVICES AT THEIR RESPECTIVE MAINS SHALL BE BY MEANS OF CUTTING OUT EXISTING WYE OR TEE AND REPLACING WITH A STRAIGHT PIECE OF EQUAL SIZE PIPE AND MAKING THE FINAL CONNECTION WITH "NON-SHEAR" COUPLINGS.

DISCONNECTION OF ALL SERVICES MUST BE PERFORMED PRIOR TO THE DEMOLITION OF AN EXISTING STRUCTURE. EXISTING SERVICES TO BE ABANDONED SHALL BE FILLED OR REMOVED.

17) CONNECTING TO AN EXISTING SEWER: WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING "Y", "T", OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
i) REMOVAL OF A SECTION OF THE EXISTING PIPE WILL BE REQUIRED. INSTALL A NEW "Y" OR "T" FITTING WITH NON-SHEAR REPAIR COUPLINGS, FOLLOWING MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION. NO CUT-IN CONNECTION, MADE BY BREAKING OR CUTTING A HOLE IN THE MAIN AND INSERTING THE SPIGOT END OF AN ORDINARY SEWER PIPE SHALL BE PERMITTED.
ii) OTHER CONNECTIONS MAY BE APPROVED BY THE CITY AS CONDITIONS WARRANT.

18) STRUCTURES LOCATED WITHIN THE 100-YEAR FLOODPLAIN: SANITARY SEWER MANHOLES CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN MUST BE CONSTRUCTED WITH A WATER-TIGHT LOCK-TYPE FRAME AND COVER, NEENAH R-1916 C OR APPROVED EQUAL.

19) VIDEO NOTE ON ALL PLANS: ENGINEERING PLANS MUST CONTAIN THE FOLLOWING NOTE: "A CURRENT COLOR VIDEO RECORD AND A WRITTEN TRANSCRIPTION OF THE INTERNAL INSPECTION OF THE NEWLY CONSTRUCTED STORM AND SANITARY SEWER SYSTEMS SHALL BE SUBMITTED PRIOR TO REFUNDING OF SITE IMPROVEMENT ESCROW RETENTION MONIES BY THE CITY OF ST CHARLES. ALL PUBLIC MAINS SHALL BE TELEVISED AND DIGITALLY RECORDED. THE CONTRACTOR MUST ROTATE THE LENS OF THE CAMERA TO LOOK AT ALL SERVICES. THE SERVICE CONNECTIONS MUST BE NOTED IN THE TELEVISION REPORT. WHEN THE PROPOSED SANITARY SEWER SYSTEM CONNECTS TO AN EXISTING SEWER SYSTEM, THE EXISTING SEWER MUST ALSO BE TELEVISED AND REPORTED. THE CONTRACTOR SHALL COORDINATE THE TELEVISING OF EXISTING CONTIGUOUS SEWERS WITH THE CITY OF ST CHARLES. ALL LINES SHALL BE FLUSHED AND CLEANED PRIOR TO TELEVISING."

20) GPS LOCATION OF UTILITIES: THE FOLLOWING SHALL BE GPS LOCATED IN COORDINATION WITH THE CITY:

•SANITARY MANHOLES, WYES, TEES, CLEANOUTS AND ANY SERVICE STUBS. GPS LOCATION SHALL BE COMPLETED PRIOR TO BACKFILLING ALL WYES, TEES AND STUBS.

21) CONNECTING TO AN EXISTING STRUCTURE: PIPE PENETRATIONS INTO EXISTING SANITARY MANHOLES SHALL BE PROPERLY SIZED AND CORED AND SEALED WITH FLEXIBLE WATERTIGHT CONNECTIONS (REFER TO CITY SANITARY SEWER CONNECTION TO EXISTING MANHOLE DETAIL).

WM NOTES: SANITARY SEWER TESTING NOTES

1. THE MAXIMUM ALLOWABLE INFILTRATION SHALL BE 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE. THE USE OF A V-NOTCH WEIR OR A PLUG WITH SPIGOT TO MEASURE FLOWS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO THE TEST.
2. THE SANITARY SEWER SHALL BE TELEVISED BY THE CONTRACTOR AND A VIDEO TAPE RECORD SHALL BE MADE AND TURNED OVER TO THE MUNICIPALITY AFTER CONSTRUCTION BUT PRIOR TO PLACING THE SANITARY SEWER INTO SERVICE.
3. ALL SANITARY SEWERS WILL BE AIR TESTED BY THE CONTRACTOR UNDER THE SUPERVISION OF THE MUNICIPALITY ENGINEER. ALL TESTING WILL BE DONE IN CONFORMANCE WITH THE 'STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS', CURRENT EDITION.
4. ALL SANITARY MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C-1244-02 PRIOR TO PLACING INTO SERVICE

CITY OF ST. CHARLES STORM WATER MANAGEMENT /SITE GRADING

DESIGN REQUIREMENTS:

1) HIGH WATER LEVEL: THE PROPOSED GRADING CONDITIONS SHALL NOT RESULT IN CONDITIONS THAT WILL CAUSE WATER TO POND ON ADJACENT PROPERTY AND SHALL MEET THE FREEBOARD REQUIREMENTS OF THE KANE COUNTY STORMWATER MANAGEMENT ORDINANCE, INCLUDING CITY OF ST. CHARLES AMENDMENTS.

2) OFF-SITE GRADING: OFF-SITE GRADING WILL NOT BE PERMITTED UNLESS PERMISSION IN THE FORM OF AN EASEMENT IS OBTAINED FROM THE SUBJECT PROPERTY OWNER.

3) RELEASE RATES: STORM WATER RELEASE RATES SHALL MEET REQUIREMENTS OF THE KANE COUNTY STORMWATER ORDINANCE, AS ADOPTED AND MODIFIED BY THE CITY OF ST CHARLES.

4) WATERSHED BOUNDARIES: PROPOSED CONSTRUCTION MAY NOT RESULT IN ANY MODIFICATION TO EXISTING WATERSHED BOUNDARIES OR THE ALTERATION OF OFF-SITE DRAINAGE PATTERNS.

5) STORMWATER DESIGNS SHALL MEET OR EXCEED THE KANE COUNTY STORMWATER ORDINANCE AS ADOPTED AND MODIFIED BY THE CITY OF ST CHARLES.

6) BASIN GRADING AND ACCESS:
a. PROVIDE A 10' WIDE (MIN.) EMBANKMENT (MAX OF 3:1 SLOPE) TO FUNCTION AS ACCESS TO THE BOTTOM OF THE BASIN.
b. PROVIDE FLAT (MAX 5:1 CROSS-SLOPE) ACCESS TO RESTRICTOR STRUCTURE.
c. 4:1 MAX. SIDE SLOPE FOR GRASS EMBANKMENTS, 3:1 MAX. SIDE SLOPE FOR EMBANKMENTS PLANTED WITH NATURAL/DEEP ROOTED VEGETATION.

7) FLARED END SECTION: FLARED END SECTIONS SHALL BE REQUIRED IN ANY AREAS WHERE A STORM SEWER DISCHARGES INTO A DETENTION BASIN. PERMANENT EROSION CONTROL SHALL BE PROVIDED WITH RIPRAP AT ALL FLARED END SECTIONS. TEMPORARY EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, SHALL BE PROVIDED AT ALL OUTLET FLARED END SECTIONS, AND SHALL BE MAINTAINED UNTIL THE TOPSOIL HAS BEEN ADEQUATELY STABILIZED WITH VEGETATIVE COVER. (SEE STORM SEWER SECTION FOR ADDITIONAL FLARED END SECTION REQUIREMENTS.)

8) GREEN SPACE, SLOPE REQUIREMENTS: GREEN SPACE SLOPES SHALL CONFORM TO THE FOLLOWING:
•4:1 MAXIMUM SLOPE
•2% MINIMUM SLOPE

9) RETAINING WALLS: WHERE RETAINING WALLS GREATER THAN (4) FOUR FEET HIGH ARE REQUIRED, A REGISTERED ILLINOIS STRUCTURAL ENGINEER MUST DESIGN THE RETAINING WALL AND SIGN/SEAL THE PLANS.

10) INLET PONDING, MAXIMUM LEVELS: THE ENGINEER SHALL CALCULATE THE 100-YEAR WATER SURFACE ELEVATIONS FOR THE STORMWATER STORAGE FACILITIES. INLET PONDING IN EXCESS OF ONE FOOT DURING A 100-YEAR EVENT WILL NOT BE PERMITTED. THE OVERFLOW ROUTE AND LIMITS OF PONDING SHALL BE CLEARLY ILLUSTRATED ON THE PLANS. PAVED PARKING LOTS MAY NOT BE UTILIZED TO PROVIDE ANY PORTION OF THE REQUIRED SITE RUN-OFF STORAGE VOLUME.

11) OVERFLOW: AN OVERFLOW DRAINAGE ROUTE MUST BE ESTABLISHED. ALL STORM WATER MANAGEMENT FACILITIES SHALL HAVE A CLEARLY DEFINED AND PROTECTED OVERFLOW ROUTE ILLUSTRATED WITH AN OVERFLOW ELEVATION AND A LARGE ARROW. THE OVERFLOW ROUTES THROUGH THE SUBDIVISION SHALL ALSOBE ILLUSTRATED WITH LARGE ARROWS AND SPOT ELEVATIONS SHALL BE SHOWN AT 50' INTERVALS ALONG THE ROUTE OVERFLOW WEIR LOCATIONS SHOULD BE IDENTIFIED ON FINAL ENGINEERING PLANS AND APPROPRIATE MEASURE TAKEN TO ENSURE THAT BUILDING AND ASSOCIATED APPARATUS (A/C UNITS, FIREPLACES, ETC.) DOES NOT IMPACT THE OVERFLOW ROUTE OR WEIR.

12) PAVEMENT SLOPE REQUIREMENTS: PAVEMENT SLOPES SHALL CONFORM TO THE FOLLOWING:
•PARKING LOTS: 1% MINIMUM AND 5% MAXIMUM
•STREETS/CURB AND GUTTER: 0.5% MINIMUM SLOPE
•DRIVEWAYS/PROPERTY ACCESS: 8% MAXIMUM SLOPE

13) STORMWATER MANAGEMENT REPORT: A STORMWATER MANAGEMENT REPORT SHALL BE SUBMITTED TO THE CITY FOR REVIEW. THE REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
• ALL APPROPRIATE PERMIT FORMS, ASSOCIATED FEES NEED BE SUBMITTED.
• A NARRATIVE THAT DISCUSSES TOPOGRAPHICAL CONDITIONS, SOIL CONDITIONS, ANALYSIS METHODOLOGY, MODELING RESULTS, AND CONCLUSIONS.
• DATA FROM AN ANALYTICAL MODELING PROGRAM WHICH FEATURES HYDROGRAPH METHODOLOGY, TR20 OR EQUAL.
• A CRITICAL DURATION ANALYSIS SHALL BE PERFORMED WHICH ANALYZES THE PROPOSED TOPOGRAPHIC AND DRAINAGE CONDITIONS FOR THE 2, 6, 12, 18, AND 24-HOUR DURATIONS OF THE 100-YEAR RAINFALL. HYDROGRAPH METHODOLOGY SHALL BE USED IN COOPERATION WITH PROJECTED RAINFALL DATA AS DOCUMENTED IN THE "BULLETIN 75 HUFF DISTRIBUTION CURVE". THE LARGEST STORAGE VOLUME THAT IS PRODUCED FROM THIS ANALYSIS SHALL BE THE REQUIRED VOLUME FOR THE DEVELOPMENT.
• BASIN SIZING CALCULATIONS; REQUIRED AND PROPOSED STORMWATER STORAGE VOLUMES.
• STORMWATER RELEASE STRUCTURE CALCULATIONS INCLUDING PROPOSED, REQUIRED, AND EXISTING RELEASE RATES.
• EXHIBITS WHICH ILLUSTRATE THE FOLLOWING:
• EXISTING CONDITIONS (I.E.: TOPOGRAPHY, BUILDINGS / STRUCTURES, WATER BODIES, ROADWAYS...).
• PROPOSED CONDITIONS (I.E.: TOPOGRAPHY, LOT ALIGNMENTS, TOP OF FOUNDATION ELEVATIONS, ROADWAYS, DRAINAGE WAYS, STORMWATER STORAGE FACILITIES, OVERFLOW ROUTES...).
• EXISTING AND PROPOSED WATERSHED BOUNDARIES AND RIDGELINES.
• PROPOSED 100-YEAR WATER SURFACE ELEVATION AND HIGH-WATER LEVEL.

14) TOPOGRAPHY: A DRAINAGE PLAN SHALL BE PROVIDED WHICH INCLUDES THE FOLLOWING:
• ONE-FOOT CONTOURS.
• EASEMENTS, INCLUDING DIMENSIONS AND EASEMENT TYPE.
• PROPOSED STORM WATER STORAGE FACILITIES.
• EXISTING WATER BODIES AND DRAINAGE FEATURES.
• PROPOSED ROADWAYS AND RIGHT-OF-WAYS.
• PROPOSED LOT ALIGNMENTS AND LOT NUMBERS.
• EXISTING AND PROPOSED TOP OF FOUNDATION ELEVATIONS, INCLUDING ELEVATIONS OF LOOKOUTS AND WALKOUTS.
• OVERFLOW DRAINAGE ROUTES AND 100-YEAR WATER SURFACE ELEVATIONS WITH CROSS SECTIONS.
• PROPOSED BASIN VOLUMES, 100-YEAR WATER SURFACE ELEVATIONS, AND HIGH-WATER LEVELS.
• STORM SEWER APPURTENANCES.
• EXISTING DRAIN TILE LOCATION AND ELEVATIONS.
• PROPOSED ELEVATIONS AT ALL LOT CORNERS AND ALONG ALL BREAK POINTS AT SIDE YARDS.

16) AS-BUILT DRAWINGS: AS-BUILT DRAWINGS SHALL BE PROVIDED TO THE CITY PRIOR TO PROJECT CLOSEOUT BY THE CITY. AS-BUILT DRAWINGS SHALL ENCOMPASS ALL ITEMS AS REQUIRED ABOVE (SEE #S 10 AND 14), WITH ACTUAL FIELD MEASURED FINAL ELEVATIONS. AS-BUILT DRAWINGS SHALL INCLUDE FIELD MEASURED AND LOCATED DATA FOR ALL UTILITIES. AS-BUILT SHALL BE PROVIDED TO THE CITY AS A PAPER COPY AS WELL AS PDF AND CAD FORMATS.

CITY OF ST. CHARLES WATER SYSTEM NOTES

B: DESIGN REQUIREMENTS:

1) AUGER: AUGERING OR DIRECTIONAL DRILLING WILL BE REQUIRED AT ALL ROADWAY CROSSINGS UNLESS OTHERWISE PERMITTED BY THE CITY OF ST CHARLES PUBLIC WORKS DEPARTMENT. STEEL CASING AND SPACERS SHALL BE UTILIZED. (REFER TO CITY CASING PIPE DETAIL.)

2) COVER DEPTH: ALL WATER MAIN, HYDRANT LEADS, AND SERVICES MUST HAVE A MINIMUM COVER OF FIVE AND ONE-HALF FEET, AND A MAXIMUM COVER OF TEN FEET. VARIATIONS FROM THESE STANDARDS WILL REQUIRE APPROVAL OF THE PUBLIC WORKS DEPARTMENT.

3) FIRE FLOWS: APPROPRIATE WATER PRESSURE AND FLOW MUST BE PROVIDED IN ACCORDANCE WITH THE MOST CURRENT ADOPTED INTERNATIONAL FIRE CODE.

4) HYDRANTS: HYDRANTS MUST BE PLACED AT A MAXIMUM OF 400-FOOT INTERVALS, AND MAY NOT BE LESS THAN THREE FEET FROM THE BACK OF CURB. NO BUILDABLE AREA SHALL BE FARTHER THAN 300' FROM A FIRE HYDRANT, AND A MINIMUM OF ONE HYDRANT SHALL BE LOCATED AT EACH INTERSECTION. FOR PROPOSED SUBDIVISIONS, HYDRANTS SHALL BE LOCATED AT HIGH POINTS FOR AIR RELEASE. ALL HYDRANT LOCATIONS SHALL BE COORDINATED WITH THE CITY OF ST. CHARLES FIRE DEPARTMENT AND PUBLIC WORKS DEPARTMENT.

DURING WATER MAIN INSTALLATION AND BEFORE THE WATER MAIN HAS BEEN PLACED INTO OPERATION, THE CONTRACTOR SHALL "BAG" OR COVER FIRE HYDRANTS. THE BAG WILL BE REMOVED BY THE CITY AFTER THE MAIN HAS BECOME OPERATIONAL. ALL HYDRANTS SHALL BE PLACED AND ROTATED TO FACE THE ROADWAY.

5) HORIZONTAL AND VERTICAL SEPARATION: - SEPARATION REQUIREMENTS SHALL FOLLOW THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS AND THE TEN STATES STANDARDS.

A TEN-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND APPURTENANCES AND ALL OTHER UTILITIES, PUBLIC AND PRIVATE.

WATER APPURTENANCES SHALL BE A MINIMUM OF TWENTY FEET FROM PERMANENT STRUCTURES; THIS APPLIES TO ANY STRUCTURE THAT MAY REQUIRE A BUILDING PERMIT (I.E. RETAINING WALLS, POOLS, SHEDS, GARAGES, ETC.)

6) ABANDONING AND REPLACING EXISTING SERVICES: ALL EXISTING SERVICES SHALL BE ABANDONED AT THE MAIN BY REMOVING THE CORPORATION STOP AND USING A STAINLESS-STEEL BAND CLAMP TO COMPLETE REMOVAL. EXISTING LEAD SERVICE LINES SHALL BE REPLACED FROM THE MAIN TO THE METER.

EXISTING SERVICES THAT UTILIZE A MECHANICAL TEE SHALL BE ABANDONED BY REMOVING THE TEE AND SLEEVING THE MAIN.

7) INTERRUPTION OF WATER USAGE: WATER SERVICES MAY ONLY BE INTERRUPTED WHEN THE TRANSFER OF SERVICES TO THE NEW MAIN TAKES PLACE. SERVICES SHALL BE TRANSFERRED SUBSEQUENT TO TESTING AND CHLORINATION OF THE PROPOSED MAIN. THE CONTRACTOR SHALL CONTACT THE ST. CHARLES WATER DIVISION AT 630-377-4405 PRIOR TO TRANSFER OF SERVICE; A MINIMUM NOTICE OF THREE BUSINESS DAYS WILL BE REQUIRED.

8) RESIDENTIAL SERVICES, DOMESTIC: DOMESTIC WATER SERVICES SHALL BE PROVIDED TO EACH LOT. THE MINIMUM SIZE FOR DOMESTIC SERVICES IS ONE INCH. ONCE INSTALLED, ALL SERVICES EXTENDING TO THE CITY RIGHT-OF-WAY LIMITS SHALL BE LOCATED UTILIZING A 2" X 4" WOODEN STAKE PAINTED BLUE.

9) COMMERCIAL DOMESTIC SERVICES/ FIRE PROTECTION: WHERE FIRE PROTECTION SERVICES ARE REQUIRED, COMBINED DOMESTIC AND FIRE PROTECTION SERVICES SHALL BE PROVIDED.
i) THE FIRST O. S. & Y. VALVE ON THE INSIDE OF THE BUILDING MUST BE IN PLACE FOR PRESSURE TESTING, CHLORINATION AND SAMPLING.
ii) TESTING AGAINST FLANGES WILL NOT BE ALLOWED.

10) THRUST BLOCKING: PREFORMED CONCRETE BLOCK THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS GREATER THAN 10 DEGREES, AT ALL MECHANICAL JOINT CONNECTIONS, AND AT ALL FIRE HYDRANTS (REFER TO CITY THRUST BLOCKING DETAIL.)

11) TRENCH BACKFILL: ALL UTILITY AND SERVICE TRENCHES WITHIN THREE FEET OF PAVED SURFACES, OR AT A DISTANCE SPECIFIED BY THE ENGINEER, SHALL BE BACKFILLED WITH CA-7 (VIRGIN CRUSHED LIMESTONE), MECHANICALLY COMPACTED IN ONE-FOOT LIFTS TO 95% PROCTOR DENSITY.

FLOWABLE FILL: THE CITY MAY APPROVE OR REQUIRE THE USE OF FLOWABLE FILL AS BACKFILL UNDER EXISTING PAVEMENTS. FLOWABLE FILL SHALL MEET IDOT STANDARDS FOR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MIXTURE #1.

12) VALVE SPACING: VALVES SHALL BE SPACED AT INTERVALS NOT TO EXCEED 600 FEET. VALVE LOCATIONS AT WATER MAIN CROSSINGS SHALL BE DESIGNED TO PROVIDE ONE LESS VALVE THAN LEGS OF THE CROSSING.
(TWO VALVES REQUIRED PER TEE CROSSING, THREE VALVES REQUIRED PER "X" CROSSING.)

13) VALVE VAULTS: ALL WATER VALVE VAULTS ARE TO BE PRE-CAST REINFORCED CONCRETE, CONCENTRIC TYPE. (REFER TO CITY VALVE VAULT DETAIL.)

14) WATER MAIN, MINIMUM SIZE: THE MINIMUM SIZE FOR ANY PUBLIC WATER MAIN SHALL BE 8" (WITH THE EXCEPTION OF HYDRANT LATERALS THAT MAY BE 6". (SEE DESIGN REQUIREMENT #3 ABOVE FOR FIRE FLOW CONSIDERATIONS.)

15) MUNICIPAL WATERMAIN DEAD ENDS: THE WATER SYSTEM MUST BE EXTENDED, AT A MINIMUM, TO THE LIMITS OF THE DEVELOPMENT AND LOOPED WHEREVER POSSIBLE. NOTE ON ALL PLANS WHICH MAINS ARE TO BE PUBLIC AND PRIVATE. WHERE DEAD END MAINS CANNOT BE AVOIDED ON A TEMPORARY BASIS, A FIRE HYDRANT SHALL BE PLACED AT THE END TO MEET WATER MAIN FLUSHING REQUIREMENTS.

16) CONNECTING TO EXISTING WATER MAINS: THE PREFERRED METHOD OF CONNECTION TO EXISTING WATERMAINS SHALL BE VIA CUT-IN TEE. WATERMAIN SHUT DOWNS SHALL BE COORDINATED AS IDENTIFIED IN #7 INTERRUPTION OF WATER SERVICE. PRESSURE CONNECTIONS WILL ONLY BE ALLOWED AS APPROVED BY CITY OF ST. CHARLES PUBLIC WORKS DEPARTMENT. WHEN A PRESSURE CONNECTION IS UTILIZED, THE VALVE SHALL BE CONNECTED WITHIN A VAULT. NO WATER CONNECTION SHALL BE WITHIN THREE FEET OF AN EXISTING WATERMAIN JOINT.

17) SERVICE TAPS: IT IS PREFERRED THAT SERVICE TAPS TO WATER MAINS ARE PERFORMED PRIOR TO CONDUCTING PRESSURE TESTING OF THE WATER MAIN. WATER SERVICE CONNECTIONS SHALL BE MADE BY APPROVED PERSONNEL.

18) LANDSCAPING: LANDSCAPE PLANTINGS SHALL NOT INTERFERE WITH OPERATION AND MAINTENANCE OF WATER APPURTENANCES. TREES SHALL BE PLACED NO CLOSER THAN TEN FEET FROM ANY STRUCTURE.

19) FIRE HYDRANT EXTENSIONS: FIRE HYDRANTS SHALL BE INSTALLED WITH A MAXIMUM OF ONE EXTENSION KIT USED, AND A MAXIMUM EXTENSION OF 12". FIRE HYDRANT EXTENSION KITS MUST BE OF THE SAME MANUFACTURE AS THE HYDRANT, AND MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS USING ORIGINAL MANUFACTURER'S PARTS.

20) JOINT RESTRAINT: JOINT RESTRAINTS SHALL FOLLOW STATE SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION.

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GENERAL NOTES

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

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NOT FOR CONSTRUCTION

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CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT

WM NOTES: GENERAL NOTES

1. ELEVATIONS ARE U.S.G.S DATUM.
2. DO NOT SCALE DRAWINGS.
3. THE CITY OF ST. CHARLES STANDARDS SUPERCEDE ALL OTHERS. THE CONTRACTOR SHALL NOTIFY THE CITY A MINIMUM OF 48 HOURS PRIOR ANY INSPECTION.
4. THE CONTRACTOR SHALL EXAMINE THE PLANS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK, AND INFORM HIMSELF FULLY WITH THE WORK INVOLVED, GENERAL AND LOCAL CONDITIONS, ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS AND ALL OTHER PERTINENT ITEMS WHICH MAY AFFECT THE COST AND TIME OF COMPLETION OF THIS PROJECT BEFORE SUBMITTING A PROPOSAL. PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO THE START OF WORK. ANY DISCREPANCIES FOUND SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND A RESPONSE PROVIDED BY THE ENGINEER.
6. THE ACCURACY AND COMPLETE INCLUSION OF THE LOCATIONS OF EXISTING UTILITIES IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PRIVATE AND PUBLIC UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, OWNER, AND UTILITY OWNER, BY THE CONTRACTOR AT HIS OWN EXPENSE.
7. OPEN EXCAVATION WITHIN THE PAVEMENT OR PARKWAY SHALL NOT BE LEFT OVER A WEEKEND, HOLIDAY, OR AFTER 3 P.M. ON THE DAY PRECEDING A WEEKEND OR HOLIDAY, OR ANY TIME THE EXCAVATION CANNOT BE SUPERVISED AND SECURED TO THE SATISFACTION OF THE ENGINEER AND AUTHORITY HAVING JURISDICTION.
8. THE CONTRACTOR SHALL RESTORE ANY AREA DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL USE. THIS SHALL INCLUDE FINISH GRADING, ESTABLISHMENT OF A VEGETATIVE COVER (SEEDING OR SOD) AND GENERAL CLEANUP. THE CONTRACTOR SHALL NOT EXCAVATE OR DISTURB BEYOND PROPERTY LINE BOUNDARIES, UNLESS OTHERWISE NOTED.
9. ALL LOT IRONS DAMAGED OR REMOVED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE ENGINEER AND SAID COST OF REPLACEMENT SHALL BE PAID BY THE CONTRACTOR.
10. ALL SITE IMPROVEMENTS, INCLUDING STORM WATER DRAINAGE (BUT NOT WATER MAIN AND SANITARY SEWER) SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION", ADOPTED JAN 1, 2022 WITH ALL SUBSEQUENT SUPPLEMENTS, AND LOCAL JURISDICTIONAL REQUIREMENTS. IN CASE OF CONFLICT, THE LATTER SHALL TAKE PRECEDENCE.
11. ALL SEWER AND WATER MAIN CONSTRUCTION SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION, UNLESS OTHERWISE NOTED.
12. ALL MANHOLES AND VALVE VAULTS SHALL HAVE "SANITARY", "STORM" OR "WATER" CAST INTO THE CAST IRON LIDS, AS APPROPRIATE.
13. ALL SEWERS AND WATER MAINS WHICH FALL WITHIN THREE FEET OF EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH AGGREGATE CA 6 OR OTHER APPROVED GRANULAR MATERIAL. THE GRAVEL SHALL EXTEND A DISTANCE OF 2'-0" BEYOND THE PAVEMENT AND EXTEND DOWN FROM THAT POINT AT A 1:1 SLOPE, AWAY FROM THE PAVEMENT.
14. "BAND-SEAL" CONNECTORS, OR EQUAL, SHALL BE USED TO JOIN PIPES OF DISSIMILAR MATERIALS
15. ALL NEW AND EXISTING STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION OF THE WORK. ADJUSTMENTS UPWARD SHALL BE MADE USING PRECAST CONCRETE ADJUSTMENT RINGS, BUT NO MORE THAN 8" OF RINGS SHALL BE USED. IF THE TOTAL HEIGHT OF ALL ADJUSTMENTS EXCEEDS 8", THEN ADJUSTMENTS SHALL BE MADE BY INTERCHANGING AND/OR ADDING/REMOVING COMPLETE BARREL SECTIONS TO ACHIEVE DESIRED ELEVATIONS.
16. WHENEVER A SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN ALL SEWERS AND SERVICES AND WATER MAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN A TRENCH WITH THE WATER MAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH KEEPING A MINIMUM OF 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THEN WITHIN A DISTANCE OF 10 FEET ON EITHER SIDE OF THE WATER MAIN, THE SEWER PIPES SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
17. PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE ENGINEER TO ANY MATERIAL OR EQUIPMENT HE DEEMS INADEQUATE AND TO ANY ITEM OF WORK OMITTED.
18. THE CONTRACTOR WILL HAVE IN HIS POSSESSION, ON THE JOB SITE, A COPY OF THE PLANS AND SPECIFICATIONS PRIOR TO BEGINNING WORK.
19. A LICENSED WELL DRILLER SHALL CAP ALL WELLS IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS. CERTIFICATES SHALL BE FURNISHED, SUBMITTED AND APPROVED BY THE APPROPRIATE HEALTH DEPARTMENT PRIOR TO ACCEPTANCE OF THE WORK.

WM NOTES: WATER DISINFECTION NOTES

AFTER THE WATER MAIN INSTALLATION HAS BEEN SATISFACTORILY COMPLETED, INCLUDING PRESSURE AND LEAKAGE TESTING, THE CONTRACTOR SHALL FURNISH EQUIPMENT AND CHEMICALS NECESSARY TO PROPERLY DISINFECT THE WORK IN ACCORDANCE WITH THE LATEST REVISION OF AWWA STANDARD C601. CHLORINE WHICH MAY BE USED IN THE DISINFECTING SOLUTIONS IS CHLORINE GAS ONLY. DISINFECTING SOLUTIONS SHALL BE APPLIED BY CONTINUOUS FEED METHOD UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER, AND SHALL CONTAIN A MINIMUM OF 50 MILLIGRAMS PER LITER (MG/L) OF AVAILABLE CHLORINE. THE DISINFECTING SOLUTION SHALL BE RETAINED IN THE MAIN FOR A PERIOD OF NOT LESS THAN 24 HOURS AFTER WHICH THE WATER SHALL CONTAIN NO LESS THAN 25 MG/L CHLORINE THROUGHOUT THE NEW WORK. AFTER THE 24 HOUR RETENTION PERIOD, THE DISINFECTING SOLUTION SHALL BE FLUSHED FROM THE MAIN UNTIL THE CHLORINE CONCENTRATION IN THE WATER FLOWING FROM THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE OWNER'S SYSTEM, OR LESS THAN 1MG/L.

WM NOTES: WATER MAIN TESTING NOTES

ALL WATER MAIN AND SERVICE PIPE, FITTINGS, VALVES AND HYDRANTS SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE OF 200 PSI AFTER INSTALLATION. EACH SECTION OF WATER MAIN AND CONNECTIONS TO BE PRESSURE TESTED SHALL BE CAREFULLY FILLED WITH WATER TO EXPEL ALL TRAPPED AIR, AND THE TEST PRESSURE SHALL BE APPLIED BY USE OF A PUMP CONNECTED TO A TAP IN THE PIPE. IN THE EVENT OF A PRESSURE LOSS, THE CONTRACTOR SHALL LOCATE AND CORRECT ALL LEAKS, AND THEN REPEAT THE HYDROSTATIC PRESSURE TEST UNTIL SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION ENGINEER.

THE FOLLOWING INSPECTIONS AND TESTING SHALL OCCUR FOR THE UNDERGROUND PIPING. THE LOCAL OFFICIAL SHALL HAVE A MINIMUM 48 HOURS NOTICE OF THE TEST. THEY SHALL INCLUDE BUT ARE NOT LIMITED TO:

a. UNDERGROUND PIPING, THRUST BLOCKS, AND RESTRAINTS SHALL BE VISUAL INSPECTED PRIOR TO BEING COVERED. THE LOCAL AUTHORITY HAVING JURISDICTION SHALL BE CONSULTED ON WHAT RELEVANT DEPARTMENT SHALL COMPLETE THE INSPECTION. A COPY OF THE INSPECTION SHALL BE PROVIDED TO THE LOCAL FIRE OFFICIAL PRIOR TO THE FLUSHING AND HYDROSTATIC TEST.

b. UNDERGROUND FLUSHING SHALL BE COMPLETED PRIOR TO THE FIRE SERVICE MAIN BEFORE THE BACKFLOW ASSEMBLY IS INSTALLED AND PUT INTO SERVICE. THE UNDERGROUND PIPING FLUSHING FLOW RATE SHALL BE NOT LESS THAN ONE OF THE OPTIONS LISTED IN NFPA 24. A COPY OF THE TESTING DOCUMENTS SHALL BE PRESENTED TO THE LOCAL FIRE OFFICIAL AT THE COMPLETION OF THE TEST.

c. UNDERGROUND HYDROSTATIC SHALL BE COMPLETED PRIOR TO THE FIRE SERVICE MAIN FROM BEING COVERED. THE PIPING SHALL BE HYDROSTATICALLY TESTED AT TWO HUNDRED POUNDS PER SQUARE INCH (200 PSI) MINIMUM AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR TWO HOURS (2 HRS).

WM NOTES: DEFLECTION TESTING FOR FLEXIBLE THERMOPLASTIC PIPE NOTES

1. ALL PIPELINE SHALL BE TESTED FOR EXCESS DEFLECTION BY PULLING A "GO - NO GO" MANDREL THROUGH THE PIPE FROM MANHOLE TO MANHOLE. THE MANDREL SHALL BE SIZED IN ACCORDANCE WITH THE TESTING LIMITS GIVEN BELOW, AND AS SPECIFIED IN THE SPECIAL PROVISIONS. A "DEFLECTOMETER" MAY ALSO BE USED TO CHECK AND RECORD DEFLECTION. WHEREVER POSSIBLE AND PRACTICAL, THE TESTING SHALL INITIATE AT THE DOWNSTREAM LINES AND PROCEED TOWARDS THE UPSTREAM LINES.
2. WHERE DEFLECTION IS FOUND TO BE IN EXCESS OF ALLOWABLE TESTING LIMITS, THE CONTRACTOR SHALL EXCAVATE TO THE POINT OF EXCESS DEFLECTION AND CAREFULLY COMPACT AROUND THE POINT WHERE EXCESS DEFLECTION WAS FOUND. THE LINE SHALL THEN BE RETESTED FOR DEFLECTION. HOWEVER, SHOULD AFTER THE INITIAL TESTING THE DEFLECTED PIPE FAIL TO RETURN TO THE ORIGINAL SIZE (INSIDE DIAMETER), THE LINE SHALL BE REPLACED.
3. SAMPLING SHALL BE PERFORMED ON ALL SEWER PIPELINE BY THE ENGINEER.
4. DEFLECTION LIMITS FOR FLEXIBLE THERMOPLASTIC PIPES:

   VERTICAL RING DEFLECTION OF POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT EXCEED 5.0%

   MANDREL DIAMETER = (100% - DEFLECTION % LIMIT) * BASE INSIDE DIAMETER (ID)

   BASE ID = AVERAGE ID - TOLERANCE PACKAGE
   AVERAGE ID = AVERAGE OD - 2* 1.06 * MIN WALL THICKNESS

   TOLERANCE PACKAGE = [(OD TOLERANCE)^ + 2(0.06 * MIN WALL THICKNESS)^ + ROUNDNESS TOLERANCE)^] ^1/2

WM NOTES: PAVEMENT & CONCRETE CONSTRUCTION NOTES

1. ALL SITE IMPROVEMENTS, INCLUDING STORM WATER DRAINAGE (BUT NOT WATER MAIN AND SANITARY SEWER) SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION", ADOPTED JAN 1, 2022 WITH ALL SUBSEQUENT SUPPLEMENTS, AND LOCAL JURISDICTIONAL REQUIREMENTS. IN CASE OF CONFLICT, THE LATTER SHALL TAKE PRECEDENCE.
2. ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAWCUT ALONG LIMITS OF PROPOSED REMOVAL BEFORE REMOVAL OPERATION BEGINS.
3. ALL CURBS CONSTRUCTED OR REPLACED OVER A UTILITY TRENCH SHALL BE REINFORCED WITH TWO #4 REBAR FOR A LENGTH OF 20 FEET CENTERED OVER THE TRENCH. SIDEWALKS SHALL BE TREATED IN THE SAME MANNER USING THREE #6 REBAR.
4. ALL PROPOSED ELEVATIONS SHOWN ON PLANS ARE FINISHED SURFACE ELEVATIONS UNLESS NOTED OTHERWISE.
5. ALL RADII ARE TO THE BACK OF CURB AND ARE NOTED ON THE PLANS.
6. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT TEN (10) FOOT MINIMUM INTERVALS. THE GRANULAR CURB BASE SHALL BE A MINIMUM OF THREE (3) INCHES OF 3/8" TO 3/4" OPEN GRADED GRANULAR MATERIAL TO ALLOW FOR PROPER SUBGRADE DRAINAGE. COMPACTED CURB SUBGRADE SHALL BE SHAPED PARALLEL TO THE CURB FLOW LINE AND POSITIVELY DRAINED TO THE INLETS AND CATCH BASINS. ALL PAVEMENTS SHALL BE CONSTRUCTED ON A SELECT COMPACTED SUBGRADE, GRADED PARALLEL TO THE FINISH SURFACE.
7. EXPANSION JOINTS SHALL BE REQUIRED AT ALL POINTS OF CURVATURE, AT BOTH SIDES OF ALL DRAINAGE STRUCTURES, AND ALL LOCATIONS WHERE THE SIDEWALK ABUTS THE CONCRETE CURB AND GUTTER.
8. CURB AND GUTTER SHALL BE CONSTRUCTED AND TIED INTO EXISTING P.C.C. PAVEMENT IN ACCORDANCE WITH I.D.O.T. STANDARDS 606001 AND 420001.
9. ALL CONCRETE CURB AND GUTTER AND SIDEWALKS SHALL BE CURED WITH W.R. MEADOWS CS-309 CURING COMPOUND OR APPROVED EQUAL.
10. ALL CONCRETE CURB AND GUTTER SHALL BE SEALED WITH W.R. MEADOWS 1144 SEALANT OR APPROVED EQUAL, IMMEDIATELY AFTER SEVEN (7) DAYS OF CURING AT A RATE OF 300 S.F. PER GALLON UTILIZING A SPRAY APPLICATION. THE SURFACE MUST BE THOROUGHLY CLEAN AND DRY OF APPLICATION.
11. ALL PUBLIC SIDEWALKS SHALL BE CONSTRUCTED OF CLASS SI CONCRETE, 5" THICK. BASE SHALL BE FOUR INCHES (4") OF COMPACTED CRUSHED STONE (CA-6).
12. WHERE NEW PAVEMENT MEETS EXISTING BITUMINOUS CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENTS, A CUT JOINT OF TRANSITIONAL LENGTH NO LESS THAN TEN (10') FEET WILL BE REQUIRED. THE SUBGRADE SHALL BE GRADED PARALLEL TO THE FINAL SURFACE GRADES AS SUCH, SHALL DRAIN TO THE CURB LINE AND TO THE INLETS AND CATCH BASINS. POSITIVE DRAINAGE MUST BE ACCOMPLISHED ON THE COMPACTED SUBGRADE OR THE PLACEMENT OF BASE MATERIAL WILL BE ALLOWED.
13. THE INSTALLATION OF THE BITUMINOUS SURFACE COURSE SHALL BE DELAYED UNTIL THE BASE COURSE IS "PROOF ROLLED" BY THE CONTRACTOR, AT HIS COST, TO THE SATISFACTION OF THE ENGINEER.
14. FLOWABLE FILL SHALL BE USED IN THE RIGHT-OF-WAY.

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ST. CHARLES, IL 60174

GENERAL NOTES

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

SHEET
C1.2
Sheet 3 of 10

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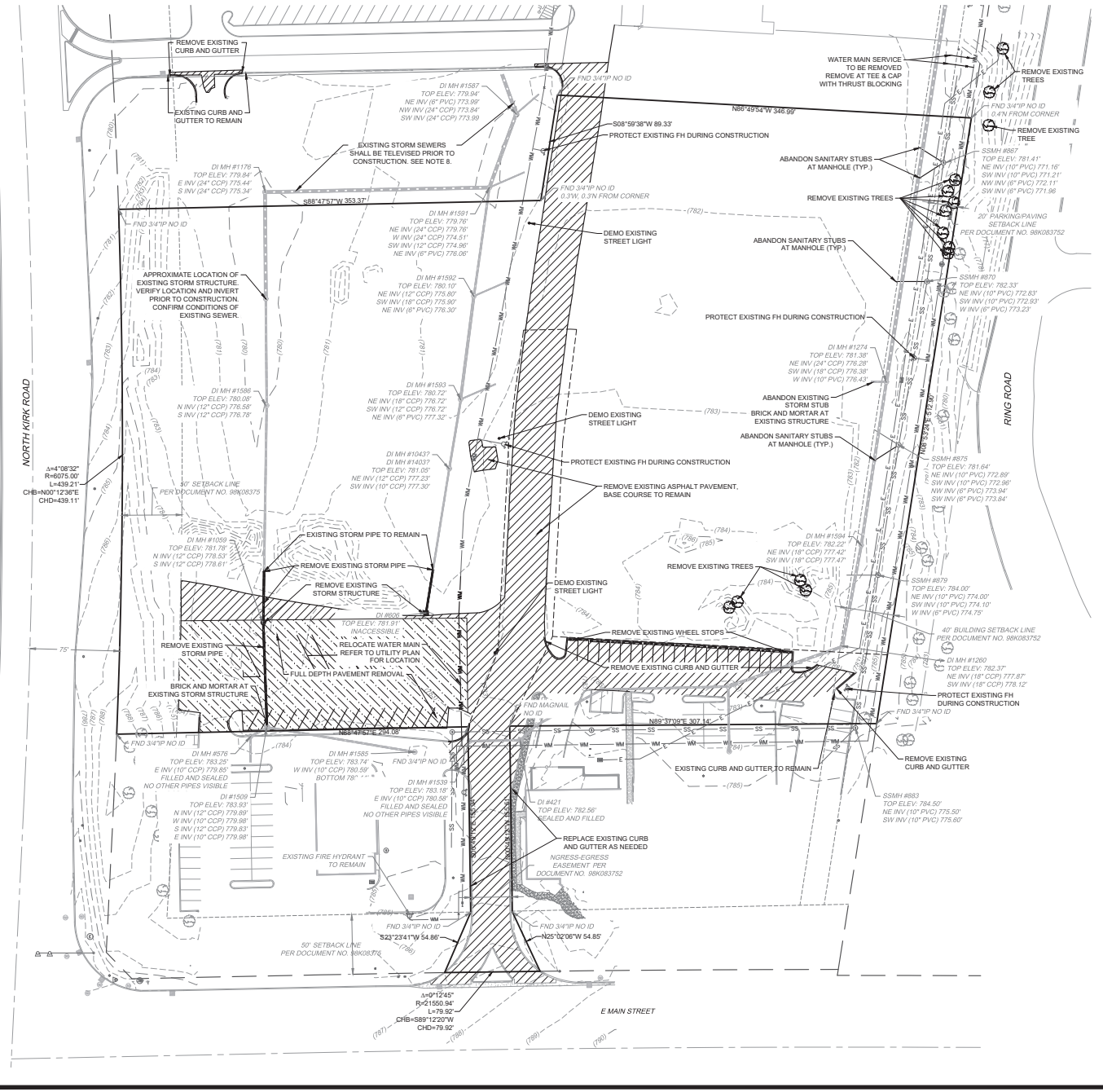

LEGEND

EXISTING		REMOVE / DEMO
	BOUNDARY	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
	CURB / GUTTER	
	SIDEWALK	
	STORM DRAIN	
SS	SANITARY	SS
WM	WATERLINE	WM

HATCH LEGEND

	REMOVE EXISTING ASPHALT. BASE COURSE TO REMAIN
	REMOVE EXISTING ASPHALT PAVEMENT, FULL DEPTH

DEMOLITION NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. ENGINEER WILL NOT BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
2. ALL EXCAVATION SPOILS, INCLUDING BUT NOT LIMITED TO CONCRETE AND PAVEMENT EXCAVATION, SHALL BE EXPORTED AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
3. EXISTING STRUCTURES, CONCRETE, PAVEMENT, FENCES, CURBS, UTILITY BOXES, LIGHTS, GATES, ETC. NOT CALLED OUT IN THE PLANS TO BE REMOVED OR REPLACED SHALL BE PROTECTED IN PLACE.
4. CONTRACTOR TO PROVIDE TREE PROTECTION AS NECESSARY DURING CONSTRUCTION TO PRESERVE EXISTING TREES TO REMAIN. ANY TREES NOT IDENTIFIED TO BE REMOVED ARE ASSUMED TO REMAIN.
5. ALL ABANDONED SEWERS / FORCE MAINS SHALL BE PLUGGED AT BOTH ENDS WITH ATLEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUGS.
6. ALL FOUNDATIONS BELOW GROUND AND AT GROUND UTILITIES AND APPURTEANCES TO BE REMOVED.
7. ANY WATER OR SANITARY NOW SHOWN ON THESE PLANS TO BE ABANDONED/REMOVED AS NEEDED.
8. CONTRACTOR TO TELEVISE EXISTING STORM SEWER FROM BEGINNING OF RUN TO EXISTING DETENTION BASIN OFF OF FOXFIELD DRIVE, NORTH OF JEWEL BUILDING. SEWERS SHALL BE CLEANED OF DEBRIS AND FUNCTIONING. NOTIFY OWNER AND ENGINEER OF ANY SEWERS IN DISREPAIR.

SCALE: 1" = 40'

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EXISTING CONDITIONS & DEMOLITION PLAN

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
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SHEET
C2.0
Sheet 4 of 10

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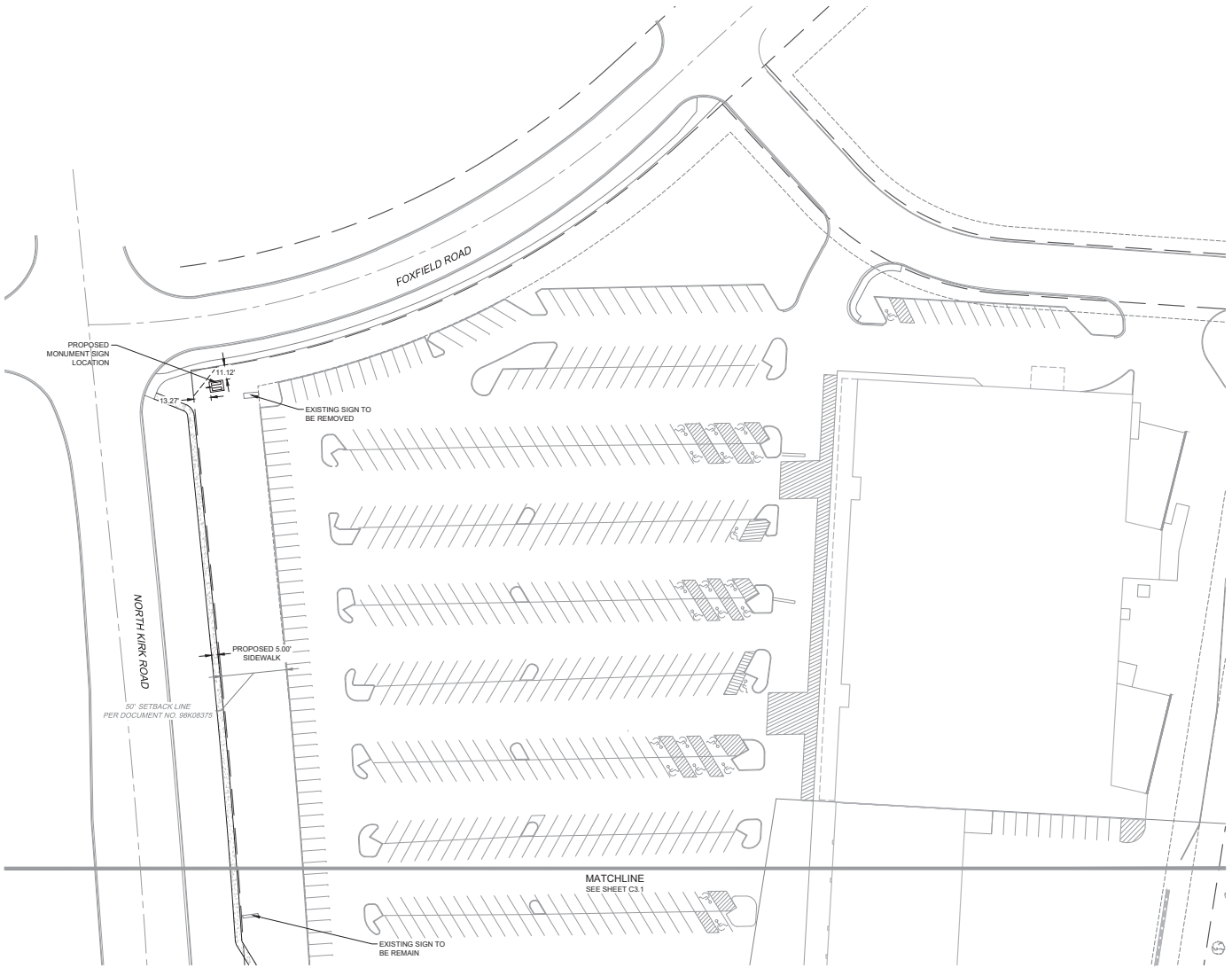

LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
(5280)	MAJOR CONTOUR	5280
(5278)	MINOR CONTOUR	5278
	CURB / GUTTER	
	BUILDING	
N/A	SAWCUT	
	STORM DRAIN	
	STORM CLEANOUT	
	STORM INLET	
	STORM MANHOLE	
SS	SANITARY	SS
	SANITARY CLEANOUT	
	SANITARY MANHOLE	
WM	WATERLINE	WM
	FIRE HYDRANT	
	WATER VALVE	
	WATER MANHOLE	
	LIGHT POLE	
ETRANS	TRANSFORMER	ETRANS
E	ELEC VAULT	E
	SIDEWALK RAMP	

HATCH LEGEND

	PROPOSED CONCRETE SIDEWALK
	PROPOSED HEAVY DUTY ASPHALT PAVING
	PROPOSED LIGHT DUTY ASPHALT PAVING
	PROPOSED PLANTING AREA
	PROPOSED BIORETENTION PLANTINGS
	PROPOSED STAMPED CONCRETE

SITE NOTES

1. CONTRACTOR TO FIELD-VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
3. DIMENSIONS ARE TO BACK OF CURB AND BUILDING FACE UNLESS OTHERWISE NOTED.
4. PAVEMENT THICKNESS AND DESIGN ARE PER THE GEOTECHNICAL REPORT.
5. ACCESSIBLE CURB RAMPS SHALL BE CONSTRUCTED WITH DETECTIBLE WARNING PADS IF REQUIRED BY LOCAL CRITERIA.
6. CONTRACTOR SHALL REMOVE AND REPLACE CURB, GUTTER, PAVING, LANDSCAPE, AND ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION.
7. ALL PROPOSED STRIPING TO BE 4" WIDE PAINTED YELLOW STRIPE, UNLESS NOTED OTHERWISE.
8. ALL PARKING SPACES ARE SHARED PARKING.

SITE DATA

PROPERTY AREA: ±328,432F (7.54 AC)
- PROPOSED IMPERVIOUS: 6.00 AC
- PROPOSED PERVIOUS: 1.54 AC

BUILDING AREA:
- BUILDING 1: ±16,150 SF - (6,500 SF RESTAURANT, 9,650 SF RETAIL)
- BUILDING 2: ±19,500 SF - (19,500 SF RESTAURANT)
- BUILDING 3: ±14,250 SF - (4,000 SF RESTURAUNT, 10,250 SF RETAIL)
- BUILDING 4: ±40,000 SF - (6,422 SF RESTAURANT, 29,589 SF INDOOR RECREATION)
- TOTAL BUILDING G.F.A.: 89,900 SF

REQUIRED PARKING PER CITY OF ST. CHARLES PUD STANDARD AT 4 SPACES PER 1,000 SF FOR RETAIL & OFFICE SPACE AND 15 SPACES PER 1,000 SF OF RESTAURANT SPACE
REQUIRED PARKING PER CITY OF ST. CHARLES CITY CODE AT 4 SPACES PER 1,000 SF FOR INDOOR RECREATION

36,422 SF RESTAURANT SPACE,19,900 SF RETAIL & OFFICE SPACE, & 29,589 SF INDOOR RECREATION.

- RESTAURANT PARKING: 546 SPACES
- RETAIL & OFFICE PARKING: 80 SPACES
- INDOOR REC. PARKING: 118 SPACES
- TOTAL REQUIRED PARKING: 744 SPACES

TOTAL PROVIDED PARKING
- ON-SITE DEDICATED: 327 SPACES
- ON-SITE SHARED(SOUTH): 34 SPACES (SHARED WITH ON THE BORDER)
- OFF-SITE SHARED(NORTH): 87 SPACES
- TOTAL PROVIDED SPACES: 448 SPACES*

- REQUIRED ADA SPACES: 9 (FOR 401-500 SPACES)
- TOTAL PROVIDED: 10 SPACES

*VARIANCE IS REQUIRED

SCALE: 1" = 40'

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PRELIMINARY SITE PLAN

NO.	DATE	REMARKS

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PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
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SHEET
C3.0
Sheet 5 of 10

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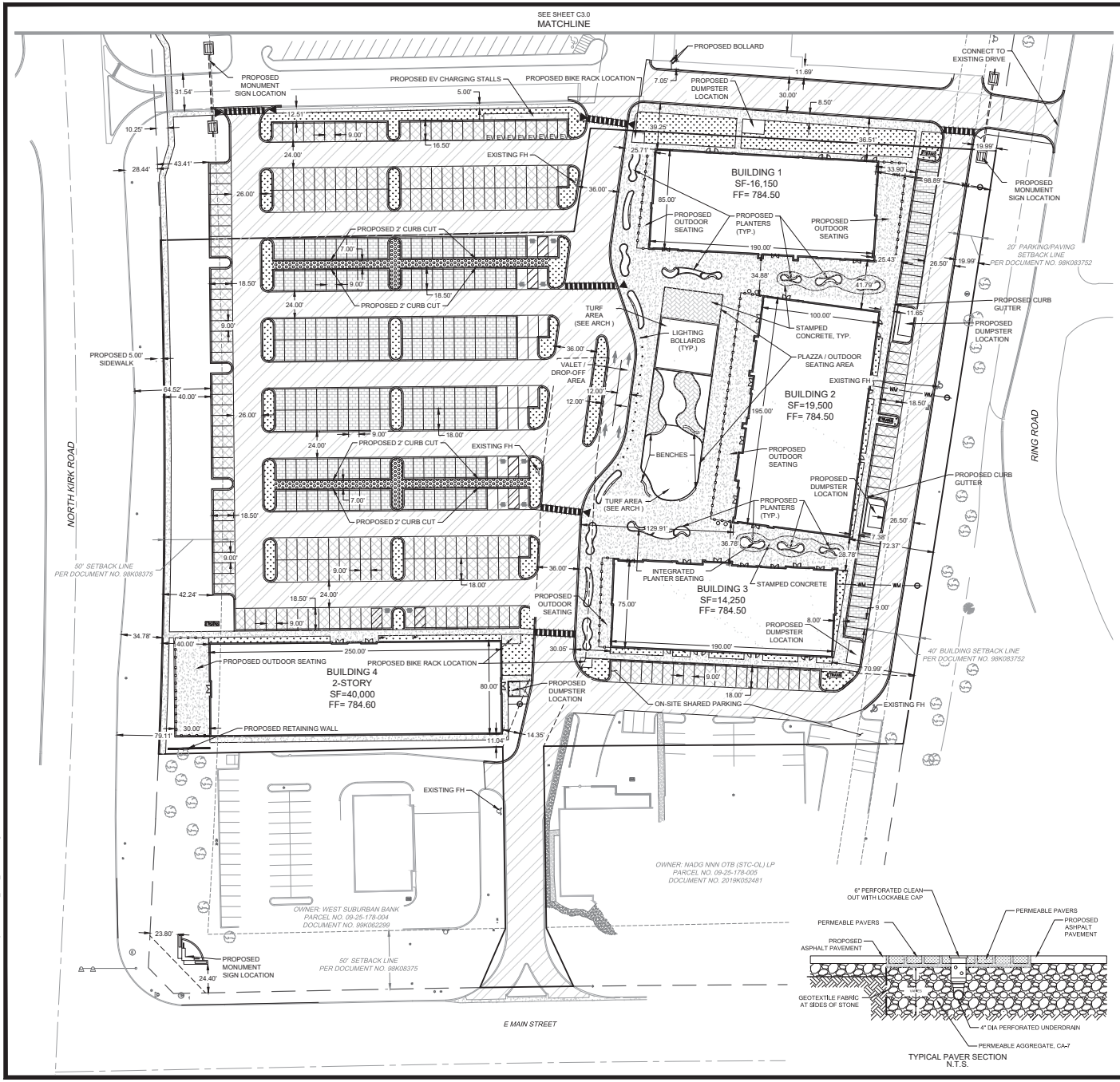

TYPICAL PAVER SECTION
N.T.S.

LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
(5280)	MAJOR CONTOUR	5280
(5278)	MINOR CONTOUR	5278
	CURB / GUTTER	
	BUILDING	
N/A	SAWCUT	
	STORM DRAIN	
C.O.	STORM CLEANOUT	C.O.
	STORM INLET	
	STORM MANHOLE	
SS	SANITARY	SS
C.O.	SANITARY CLEANOUT	C.O.
	SANITARY MANHOLE	
WM	WATERLINE	WM
	FIRE HYDRANT	
	WATER VALVE	
	WATER MANHOLE	
	LIGHT POLE	
E TRANS	TRANSFORMER	ETRANS
E	ELEC VAULT	E
	SIDEWALK RAMP	

HATCH LEGEND

	PROPOSED CONCRETE SIDEWALK
	PROPOSED HEAVY DUTY ASPHALT PAVING
	PROPOSED LIGHT DUTY ASPHALT PAVING
	PROPOSED PLANTING AREA
	PROPOSED BIORETENTION PLANTINGS
	PROPOSED STAMPED CONCRETE

SITE NOTES

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SCALE: 1" = 40'

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PRELIMINARY SITE PLAN

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

SHEET
C3.1
Sheet 6 of 10

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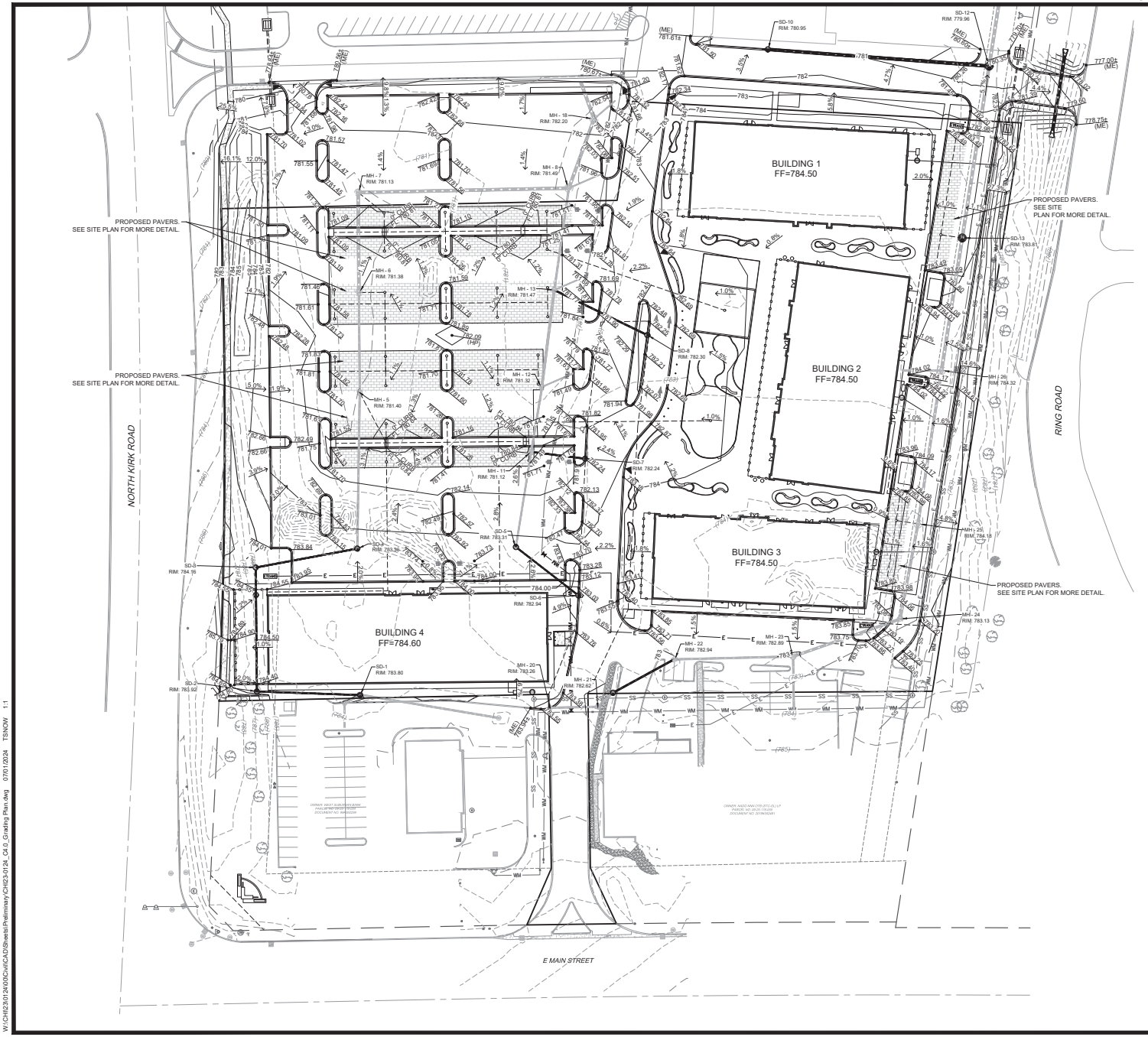

LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	SECTION	
	1/4 SECTION	
	1/16 SECTION	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
(5280)	MAJOR CONTOUR	5280
(5278)	MINOR CONTOUR	5278
	CURB / GUTTER	
	SIDEWALK	
X	FENCE	X
	ICC/A117.1 ACCESSIBLE ROUTE	
N/A	SAWCUT	
	STORM DRAIN	
SS	SANITARY	SS
WM	WATERLINE	WM
IRR	IRRIGATION	IRR
OH	OVERHEAD UTILITY	OH
CATV	CABLE TV	CATV
E	BURIED ELECTRIC	E
FO	FIBER OPTIC	FO
NGAS	NATURAL GAS	NGAS
T	TELEPHONE	T
UKWN	UNKNOWN UTILITY	N/A

GRADING NOTES

1. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE ELEVATIONS SHOWN ON THE PLANS. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
3. ELEVATIONS ARE PER THE SURVEY DATUM, NOT PER ARCHITECTURAL FLOOR ELEVATIONS.
4. ELEVATIONS ARE AT FINISHED SURFACE UNLESS OTHERWISE NOTED.
5. CURB ELEVATIONS ARE AT FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
6. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
7. SIDEWALKS AND LANDINGS SHALL BE 2% MAX CROSS-SLOPE TOWARD ROADS, DRIVE LANES, AND PARKING AREAS UNLESS OTHERWISE NOTED.
8. ACCESSIBLE PARKING STALLS AND LOADING AREAS TO BE 2% MAX SLOPE IN ANY DIRECTION.
9. REFER TO THE GEOTECH REPORT FOR GROUNDWATER ELEVATIONS.
10. GRADING OF LANDSCAPED AREAS AROUND BUILDINGS TO COMPLY WITH GEOTECH. REPORT.
11. PEDESTRIAN GUARDRAILS TO BE INSTALLED WHERE REQUIRED BY LOCAL, STATE, OR FEDERAL REQUIREMENTS. RE: ARCHITECTURAL/LANDSCAPE PLANS.
12. ALL FLOW LINE ELEVATIONS ARE 0.50' LOWER THAN TOP OF CURB ELEVATIONS UNLESS NOTED OTHERWISE.

GRADING LEGEND

5280.00	PROPOSED SPOT ELEVATION
(5280.0)	EXISTING SPOT ELEVATION
2.00%	PROPOSED SLOPE / GRADE
2.00%	EXISTING SLOPE / GRADE
	OVERLAND OVERFLOW ROUTE
HP	HIGH POINT
LP	LOW POINT
GB	GRADE BREAK
FFE	FINISHED FLOOR ELEVATION
TFI	TOP FACE OF INLET
TBC	TOP BACK OF CURB
ME	MATCH EXISTING

SCALE: 1" = 40'

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SHEET
C4.0
Sheet 7 of 10

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EROSION CONTROL BMP LEGEND

LOC	LIMITS OF CONSTRUCTION
CF	CONSTRUCTION FENCE
CWA	CONCRETE WASHOUT AREA
ECB	EROSION CONTROL BLANKET
IP	INLET PROTECTION
MU / TS	MULCHING & TEMPORARY SEEDING
PS	PERMANENT SEEDING / LANDSCAPE (PER LANDSCAPE PLAN)
SF	SILT FENCE
SP	STOCKPILE MANAGEMENT
SSA	STABILIZED STAGING AREA
VTC	VEHICLE TRACKING CONTROL

EROSION CONTROL NOTES

1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION, INCLUDING INSTALLING, REPAIRING, REPLACING, RELOCATING, AND MODIFYING AS NECESSARY FOR CONSTRUCTION AND TO ENSURE THE SITE IS IN COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS.
2. ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE NECESSARY TO PREVENT EROSION AND SEDIMENTATION.
3. AREAS THAT ARE TO REMAIN IN A DISTURBED CONDITION FOR AN EXTENDED PERIOD SHALL BE TEMPORARILY SEEDED IN ACCORDANCE WITH STATE AND LOCAL CRITERIA.
4. REFER TO THE APPROVED LANDSCAPE PLAN FOR FINAL STABILIZATION INFORMATION. AREAS NOT STABILIZED BY PAVEMENT, BUILDING FOOTPRINT, PERMANENT LANDSCAPING, OR OTHER PERMANENT STABILIZATION SHALL BE PERMANENTLY SEEDED PER STATE AND LOCAL REQUIREMENTS.
5. CONTRACTOR TO KEEP PAVEMENT CLEAN OF MUD AND DEBRIS USING SWEEPING/SCRAPING EQUIPMENT TO BE STORED ON-SITE.
6. PROVIDE VEHICLE WASHOUT FOR VEHICLES ENTERING SITE LOCATED OUTSIDE OF IDOT RIGHT OF WAY.

SCALE: 1" = 40'

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PRELIMINARY EROSION CONTROL & SEDIMENT CONTROL PLAN

NO.	DATE	REMARKS

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SHEET
C5.0
Sheet 8 of 10

NOT FOR CONSTRUCTION

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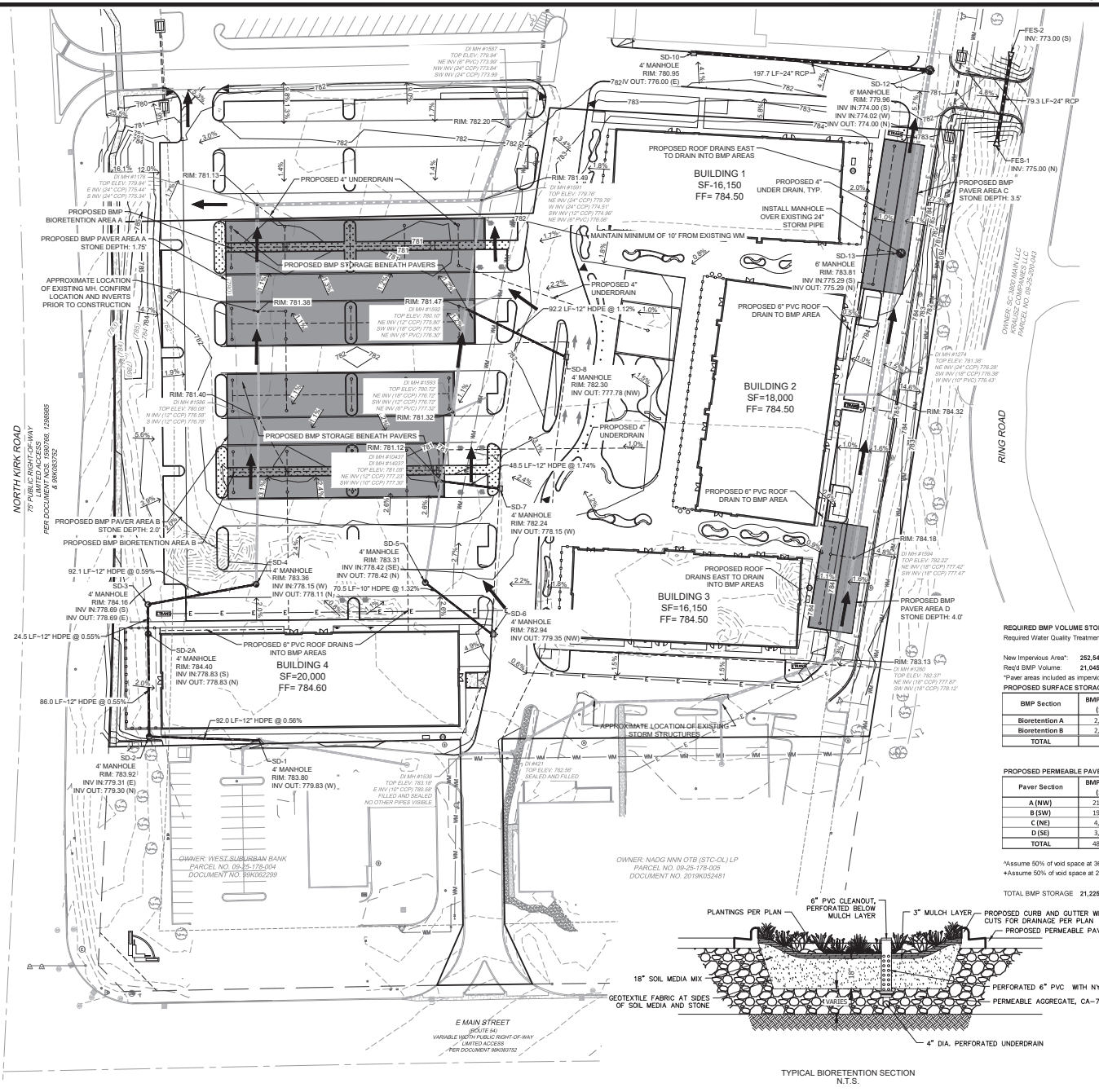

TYPICAL BIORETENTION SECTION
N.T.S.

SCALE: 1" = 40'

LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
(5280)	MAJOR CONTOUR	5280
(5278)	MINOR CONTOUR	5278
	CURB / GUTTER	
	BUILDING	
N/A	SAWCUT	
	STORM DRAIN	
	STORM CLEANOUT	
	STORM INLET	
	STORM MANHOLE	
SS	SANITARY	SS
	SANITARY CLEANOUT	
	SANITARY MANHOLE	
WM	WATERLINE	WM
	FIRE HYDRANT	
	WATER VALVE	
	WATER MANHOLE	

UTILITY NOTES

1. CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL EXISTING UTILITIES WHERE NEW GRADING OR UTILITY WORK WILL OCCUR AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
3. PROPOSED DRY UTILITIES ARE SHOWN FOR REFERENCE ONLY. REFER TO PLANS BY UTILITY PROVIDERS AND/OR MEP.
4. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
5. REFER TO THE GEOTECH REPORT FOR GROUNDWATER ELEVATIONS.
6. MANHOLES ARE CONTROLLED AT CENTER OF MANHOLE.
7. ALL RCP TO BE CLASS III OR APPROVED EQUIVALENT UNLESS OTHERWISE NOTED.
8. AII STORM AND SANITARY PVC TO BE SDR35 UNLESS OTHERWISE NOTED OR REQUIRED BY THE JURISDICTION.
9. ALL WATER MAIN TO BE DUCTILE IRON PIPE (DIP), CLASS 52 UNLESS OTHERWISE NOTED OR REQUIRED BY THE JURISDICTION.
10. SEE WATER AND SEWER SEPARATION DETAIL FOR INFORMATION ON WATER MAIN CROSSING.

REQUIRED BMP VOLUME STORAGE

Required Water Quality Treatment per Kane Co stormwater ordinance 1" over new impervious area.

New Impervious Area*: **252,544 sf**
Req'd BMP Volume: **21,045 cf**
*Paver areas included as impervious area

PROPOSED SURFACE STORAGE

BMP Section	BMP AREA (SF)	6 IN SURFACE STORAGE (CF)	18" SOIL MEDIA^	PROPOSED BMP VOLUME (CF)
Bioretention A	2,780	1,390	348	1,738
Bioretention B	2,590	1,295	324	1,619
TOTAL				3,356

PROPOSED PERMEABLE PAVERS

Paver Section	BMP AREA (SF)	PROPOSED DEPTH OF PAVERS (FT)	PROPOSED BMP VOLUME (CF)^
A (NW)	21,853	1.50	5,900
B (SW)	19,145	2.00	6,892
C (NE)	4,309	3.50	2,715
D (SE)	3,280	4.00	2,362
TOTAL	48,587	X	17,869

^Assume 50% of void space at 36% porosity counts toward BMP storage
+Assume 50% of void space at 25% porosity counts toward BMP storage

TOTAL BMP STORAGE **21,225 cf**

WARE MALCOMB
LEADING DESIGN FOR COMMERCIAL REAL ESTATE
1315 22nd street
suite 410
oak brook, il 60523
p 630.218.0063
waremalcomb.com

FOR AND ON BEHALF OF WARE MALCOMB

FOX HAVEN SQUARE
PRELIMINARY ENGINEERING
502 N KIRK RD.
ST. CHARLES, IL 60174

PRELIMINARY DRAINAGE PLAN

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

SHEET
C6.0
Sheet 9 of 10

NOT FOR CONSTRUCTION

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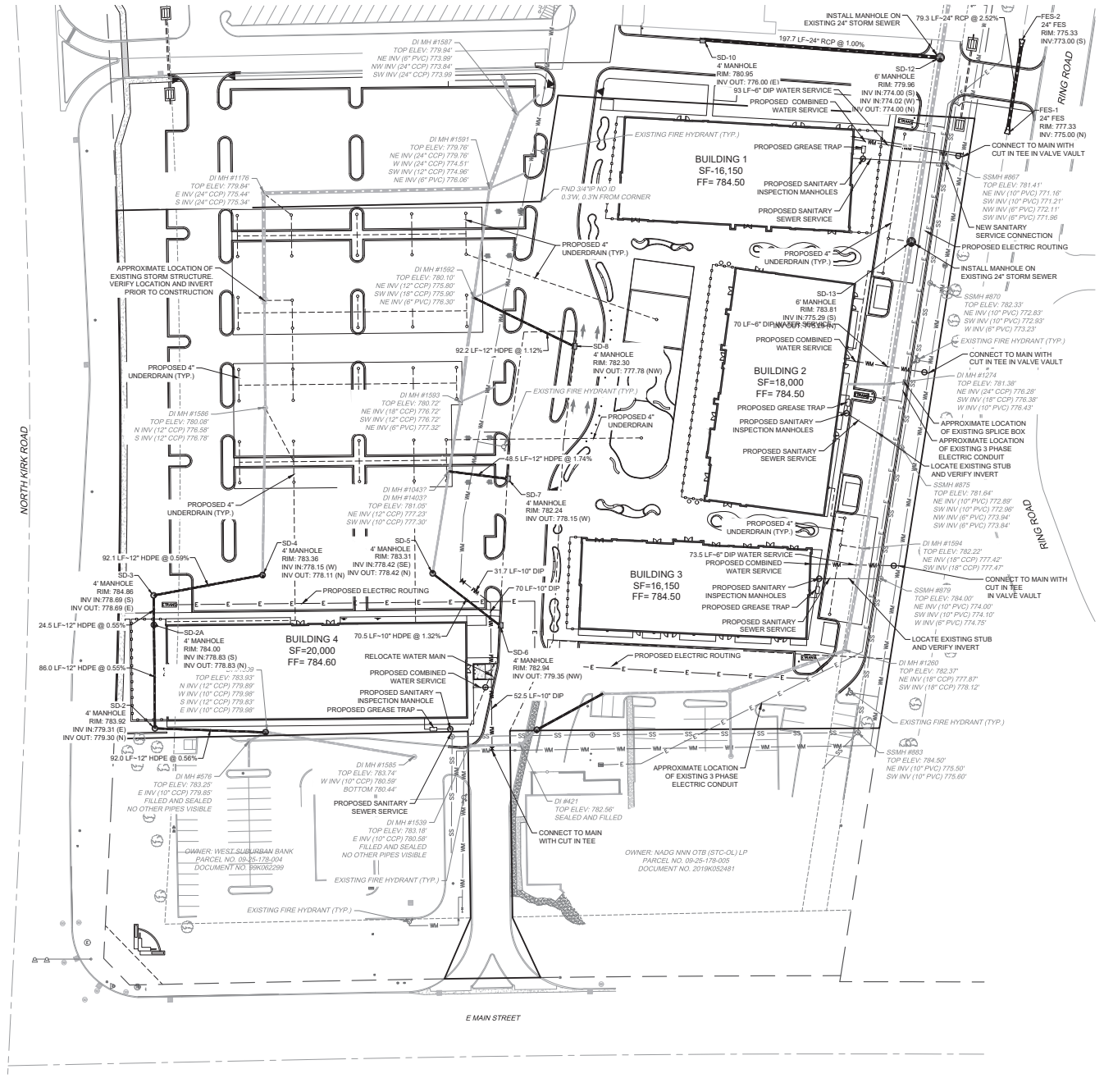
CAUTION: IF THIS SHEET IS NOT 24"x36" IT IS A REDUCED PRINT



LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	LOT LINE	
	EASEMENT	
	CENTERLINE	
--(5280)--	MAJOR CONTOUR	5280
--(5278)--	MINOR CONTOUR	5278
	CURB / GUTTER	
	SIDEWALK	
X	FENCE	X
ICC/A117.1 ACCESSIBLE ROUTE		
N/A	SAWCUT	
	STORM DRAIN	
SS	SANITARY	SS
WM	WATERLINE	WM
IRR	IRRIGATION	IRR
OH	OVERHEAD UTILITY	OH
CATV	CABLE TV	CATV
E	BURIED ELECTRIC	E
FO	FIBER OPTIC	FO
NGAS	NATURAL GAS	NGAS
T	TELEPHONE	T
UKWN	UNKNOWN UTILITY	N/A
	FIRE HYDRANT	N/A

UTILITY NOTES

1. CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL EXISTING UTILITIES WHERE NEW GRADING OR UTILITY WORK WILL OCCUR AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
3. PROPOSED DRY UTILITIES ARE SHOWN FOR REFERENCE ONLY. REFER TO PLANS BY UTILITY PROVIDERS AND/OR MEP.
4. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
5. REFER TO THE GEOTECH REPORT FOR GROUNDWATER ELEVATIONS.
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9. ALL WATER MAIN TO BE DUCTILE IRON PIPE (DIP), CLASS 52 UNLESS OTHERWISE NOTED OR REQUIRED BY THE JURISDICTION.
10. SEE WATER AND SEWER SEPARATION DETAIL FOR INFORMATION ON WATER MAIN CROSSING.
11. CONTRACTOR SHALL VERIFY CONDITION OF ALL EXISTING STORM MANHOLES PRIOR TO CONSTRUCTION. ANY MANHOLES IN DISREPAIR MUST BE REPLACED.
12. CONTRACTOR SHALL VERIFY DEPTH OF EXISTING WATERMAIN PRIOR TO CONSTRUCTION AND MAINTAIN 6-FT OF COVERAGE. NOTIFY ENGINEER OF ANY DISCREPANCIES.
13. CONTRACTOR TO TELEVISE EXISTING STORM SEWER FROM BEGINNING OF RUN TO EXISTING DETENTION BASIN OFF OF FOXFIELD DRIVE, NORTH OF JEWEL BUILDING. SEWERS SHALL BE CLEANED OF DEBRIS AND FUNCTIONING. NOTIFY OWNER AND ENGINEER OF ANY SEWERS IN DISREPAIR.

SCALE: 1" = 40'

WARE MALCOMB
LEADING DESIGN FOR COMMERCIAL REAL ESTATE
1315 22nd street
suite 410
oak brook, il 60523
p 630.218.0063
waremalcomb.com

FOR AND ON BEHALF OF WARE MALCOMB

FOX HAVEN SQUARE
PRELIMINARY ENGINEERING
502 N KIRK RD.
ST. CHARLES, IL 60174

PRELIMINARY UTILITY PLAN

NO.	DATE	REMARKS

JOB NO.:	CHI23-0124
PA / PM:	J. GRZYWA
DESIGNED:	T. SNOW
DATE:	1-19-24
PLOT DATE:	07/01/24

SHEET
C7.0
Sheet 10 of 10

NOT FOR CONSTRUCTION

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LANDSCAPE PLAN FOR:

FOX HAVEN SQUARE

St Charles, IL

Site Location Map

SHEET INDEX

Landscape Architect:
Metz & Company
826 E. Maple Street
Lombard, IL 60148
630.561.3903

Architect/Engineer:
Ware Malcomb
1315 W 22nd Street, Suite 410
Oak Brook, IL 60523
630.218.0063

811 Know what's **below.** **Call** before you dig.

REVISIONS

3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

If this plan is not 24" x 36" in size, then it is a reproduction that may not be to scale

FOX HAVEN SQUARE
502 N. Kirk Road
St Charles, Illinois

SEAL:

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
www.metz-company.com

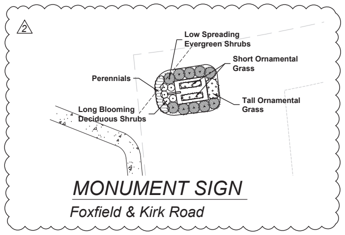
TITLE
LANDSCAPE PLAN

PROJECT NO.:
24-248

DATE: 1-19-2024

SCALE: 1"=20'

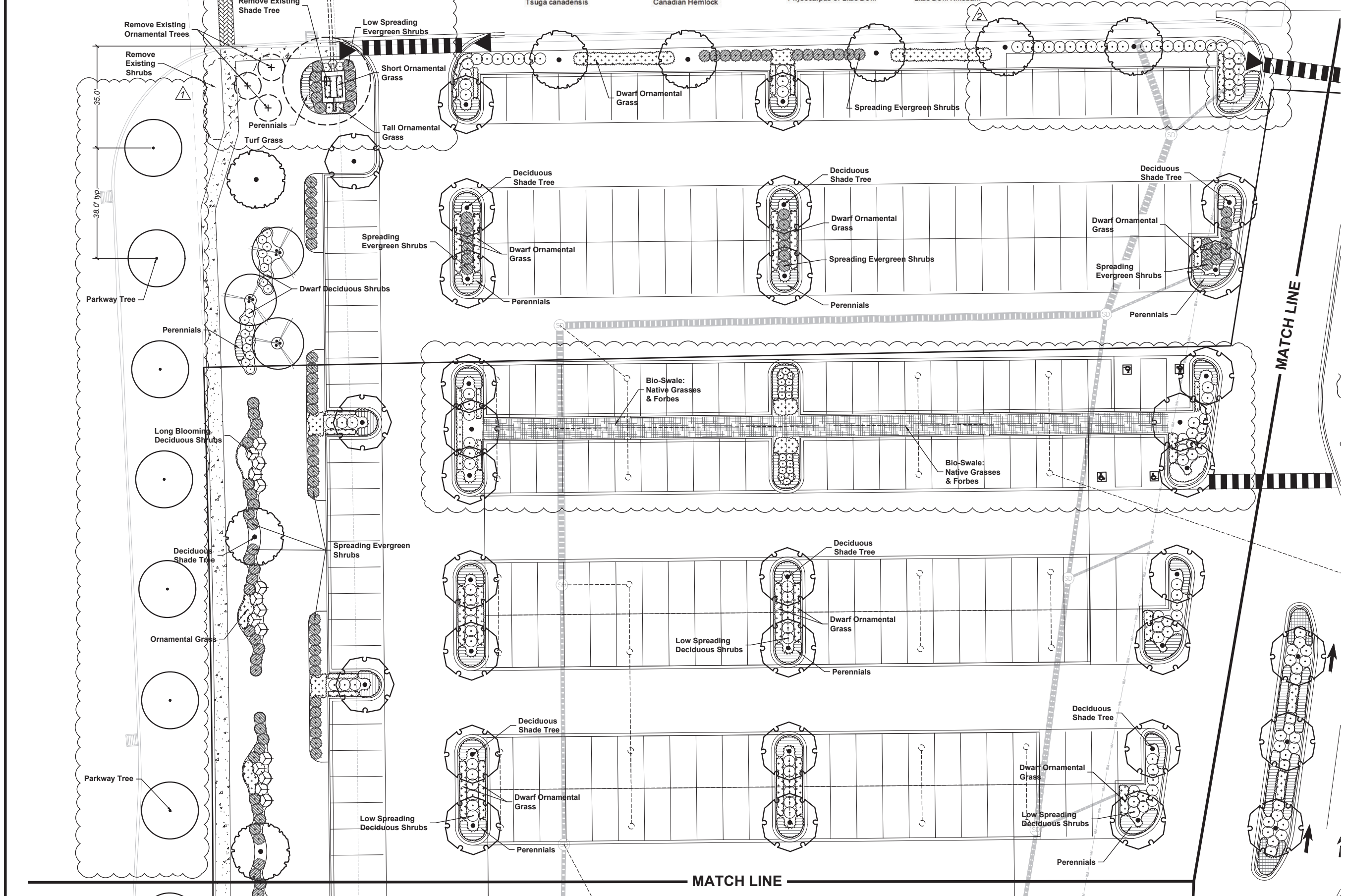
SHEET
CS-1.0



The following list of quality trees and shrubs will be used for
for final plant selections:

PLANT LIST

BOTANICAL NAME	COMMON NAME
DECIDUOUS SHADE TREES	
Acer f 'Jeffersred'	Autumn Blaze Freeman Maple
Acer f. 'Marmo'	Marmo Freeman Maple
Acer m. 'Morton'	State Street Maple
Aesculus x c 'Ft McNair'	Fort McNair Horsechestnut
Catalpa speciosa	Northern Catalpa
Celtis occidentalis	Hackberry
Ginkgo b. 'Autumn Gold'	Autumn Gold Ginkgo
Ginkgo b. 'Princeton Sentry'	Princeton Sentry Ginkgo
Gleditsia t.i.'Skyline'	Skyline Honeylocust
Gymnocladus dioicus	Kentucky Coffeetree
Gymnocladus d. 'Espresso'	Espresso Kentucky Coffeetree
Platanus x a. "Morton Circle'	Exclamation London Planetree
Quercus bicolor	Swamp White Oak
Quercus imbricaria	Shingle Oak
Quercus macrocrapa	Burr Oak
Quercus muehlenbergi	Chinkapin Oak
Quercus rubra	Red Oak
Quercus r. 'Long'	Regal Prince English Oak
Taxodium d. 'Mickelson'	Shawnee Brave Bald Cypress
Tilla a.'Redmond'	Redmond Linden
Tilla c. "Greenspire'	Greenspire Liden
Ulmus 'Frontier'	Frontier Elm
Ulmus 'Morton'	Accolade Elm
EVERGREEN TREES	
Picea abies	Norway Spruce
Picea g. 'Densata'	Black Hills Spruce
Picea pungens	Colorado Green Spruce
Picea p. "Glauca'	Colorado Blue Spruce
Picea p. 'Fat Albert'	Fat Albert Colorado Spruce
Pinus f. 'Vanderwolf's Pyramid'	Vanderwolf's Pyramid Limber Pine
Pinus strobus	Eastern White Pine
Pinus s. 'Fastigiata'	Fastigiate White Pine
Pseudotsuga menziesii	Douglas Fir
Thuja o. 'Green Giant'	Green Giant Arborvitae
Tsuga canadensis	Canadian Hemlock
DECIDUOUS ORNAMENTAL TREES	
Amelanchier g. "Autumn Brilliance'	Autumn Brilliance Serviceberry
Betula n. 'Cully'	Heritage River Birch
Carpinus caroliniana	American Hornbeam
Cercis canadensis	Eastern Redbud
Cornus alternifolia	Pagoda Dogwood
Crataegus c. inermis	Thornless Cockspur Hawthorn
Magnolia x 'Jane'	Jane Magnolia
Malus 'Donald Wyman'	Donald Wyman Crabapple
Malus 'Red Jewel'	Red Jewel Crabapple
Malus 'Prairie Fire'	Prairie Fire Crabapple
Malus s. 'Select A'	Sargent Firebird Crabapple
Malus s. 'Tina'	Sargent Tina Crabapple
Ostrya virginiana	American Hophornbeam
Syringa r. 'Ivory Silk'	Ivory Silk Tree Lilac
Syringa p. 'Morton'	China Snow Tree Lilac
Syringa p. 'Zhing Zhiming'	Beijing Gold Tree Lilac
DECIDUOUS SHRUBS & SHRUB ROSES	
Aronia melanocarpa	Black Chokeberry
Aronia m. UCONNAM166'	Low Scape Hedger Chokeberry
Clethra a. 'Sixteen Candles'	Sixteen Candles Summersweet
Cornus racemosa	Grey Dogwood
Corylus americana	American Hazelnut
Cotoneaster acutifolia	Peking Cotoneaster
Cotoneaster 'Hessei'	Hessei Cotoneaster
Diervilla r. 'SMDNDRSF'	Black Kodiak Diervilla
Diervilla r. 'G2X88544'	Orange Kodiak Diervilla
Diervilla r. 'G2X885411'	Red Kodiak Diervilla
Diervilla s. 'Butterfly'	Butterfly Bush Honeysuckle
Diervilla s. 'LPDC Podaras'	Cool Splash Bush Honeysuckle
Diervilla splendens	Splendens Bush-Honeysuckle
Hamamelis vernalis	Ozark Witch Hazel
Hydrangea a. 'Annabella'	Annabelle Hydrangea
Hydrangea a. 'Abetwo'	Incrediball Hydrangea
Hydrangea p. 'ILVOBO'	Bobo Hydrangea
Hydrangea p. 'Jane'	Little Lime Hydrangea
Hydrangea p. 'Limelight'	Limelight Hydrangea
Hydrangea p. 'Bulk'	Quick Fire Hydrangea
Hydrangea p. 'SMHPLQF'	Little Quick Fire Hydrangea
Hydrandea q. 'Pee Wee'	Pee Wee Oakleaf Hydrangea
Hydrangea s. 'MAKD'	Tiny Tuff Stuff Hydrangea
Hypericum k. 'SMHKBF'	Blue Festival St. Johnswort
Physocarpus o. 'Little Devil'	Little Devil Ninebark
Physocarpus o. 'Ginger Wine'	Ginger Wine Ninebark
Physocarpus o. 'Seward'	Summer Wine Ninebark
Rhus a.'Gro-Low'	Gro-Low Sumac
Rosa species	Shrub Roses
Spiraea species	Spirea
Syringa m. 'Pabibin'	Dwarf Korean Lilac
Syringa p. 'Miss Kim'	Miss Kim Lilac
Syringa 'SMSJBP7'	Boomerang Dark Purple Lilac
Viburnum c. 'SMVCB'	Spice Baby Viburnum
Viburnum 'Cayuga'	Koreanspice Viburnum
Viburnum d. 'Christom'	Blue Muffin Arrowwood Viburnum
Viburnum dentatum	Arrowwood Viburnum
Viburnum prunifolium	Blackhaw Viburnum
Viburnum d. 'Synnestvedt'	Chicago Lustre Viburnum
Viburnum d. 'Ralph Senior'	Autumn Jazz Viburnum
Viburnum x. 'Juddii'	Judd Viburnum
Viburnum l. 'Mohican'	Mohican Viburnum
Viburnum x rhytidophylloides	Alleghany Viburnum
Weigela x. 'Dark Horse'	Dark Horse Weigela
Weigela florida species	Weigela
EVERGREEN SHRUBS	
Juniperus chinensis species	Chinese Juniper
Juniperus horizontalis species	Horizontal Juniper
Taxus m. 'Densiformis'	Dense Yew
Taxus m. 'Everlow'	Everlow Yew
Taxus m. 'Hicksii'	Hicks Yew
Thuja o. 'Smaragd'	Emerald Green Arborvitea
BROADLEAF EVERGREENS	
Buxus m var.Koreana 'Wintergreen'	Wintergreen Boxwood
Euonymus f 'Emerald Gaiety'	Emerald Gaiety Euonymus
Euonymus f 'Emerald 'n' Gold'	Emerald 'n' Gold Euonymus
Euonymus f 'Sarcoxie'	Sarcoxie Euonymus
Euonymus f. 'Vegetus Low'	Low Bigleaf Euonymus



LEGEND

- Buffer Tree / Parking Lot Tree — 2.5" - DECIDUOUS SHADE TREES
- Parkway Tree / Foundation Trees — 2.0" or 6' - ORNAMENTAL TREES
- 6' - EVERGREEN TREES
- 30" to 36" - DECIDUOUS SHRUBS
- 24"/#5 - DECIDUOUS SHRUBS*
- 24"/#5 - EVERGREEN SHRUBS
- #1 - ORNAMENTAL GRASSES
- #1 - PERENNIALS
- from flats - GROUNDCOVERS

* Dwarf Ornamental Shrubs 18"/#3

LANDSCAPE CALCULATIONS

Parkway Trees - Kirk Road: 548 l.f.
Required: 1 tree per 40' = 14 Trees
Parkway Trees Provided = 14

Public Street Frontage Landscaping - Kirk Road: 548 l.f.
Required: 1 tree per 50' = 11, plus screening @ 75% = 411 l.f.
Trees Provided = 11 (6 ornamental & 5 shade trees)
Landscape Screening Provided = 412 l.f.

Parking Lot Screening - Parking Lot Length: 370 l.f.
Required: 50% or 185 l.f.
Landscape Screening Provided = 204 l.f.

GENERAL NOTES:

Plant material shall be nursery grown and be either balled and bur-lapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sunscald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Under no circumstances should these plans be used for construction purposes without examining actual locations of utilities on site, and reviewing all related documents mentioned herein, including related documents prepared by the project Civil Engineer and Architect.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consist of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements,

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

The Landscape Contractor shall verify location of all underground utilities prior to digging by calling "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123 and any other public or private agency necessary for utility location.

All perennial, ornamental grass, groundcover and annual beds shall be top dressed with a minimum of three inches (3") of mushroom compost. The top dressing shall be worked into the soil to a minimum depth of nine inches (9") by the use of a cultivating mechanism. Upon completion perennials & ornamental grasses shall be mulched with an additional two inch (2") layer of shredded wood mulch; Annuals & groundcovers shall be covered with a two inch (2") layer of southern pine bark fines mulch.

All other planting beds and tree saucers shall be mulched with a minimum of three inches (3") of shredded wood mulch.

Planting beds adjacent to building shall be mulched in their entirety to the building foundation. Plant materials shall not be installed under building overhangs and other such areas which do not receive natural rainfall.

Mulch beds at the time of planting shall extend a minimum of two feet (2') beyond the center of a shrub.

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.

Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's. specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

811 Know what's below. Call before you dig.

NORTH

0' 10' 20' 40'

REVISIONS

No.	Revision	Date
3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

FOX HAVEN SQUARE
502 N. Kirk Road
St Charles, Illinois

SEAL: STATE OF ILLINOIS RANDY F. METZ no. 157-000422 LANDSCAPE ARCHITECT

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
www.metz-company.com

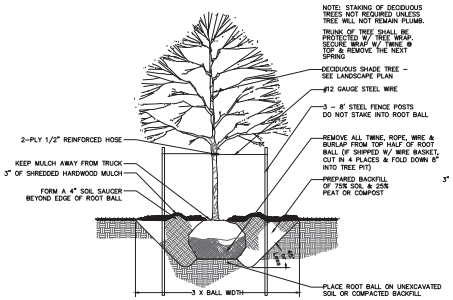
TITLE
PRELIMINARY LANDSCAPE PLAN

PROJECT NO.: 24-248

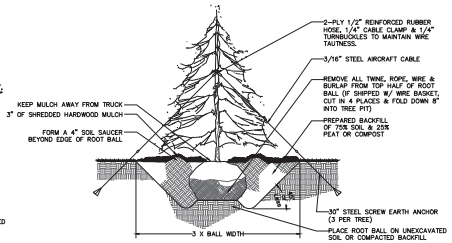
DATE: 1-19-2024

SCALE: 1"=20'

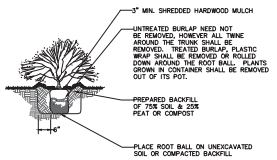
SHEET L-1.0



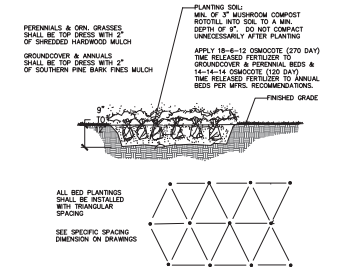
DECIDUOUS TREE n.t.s.



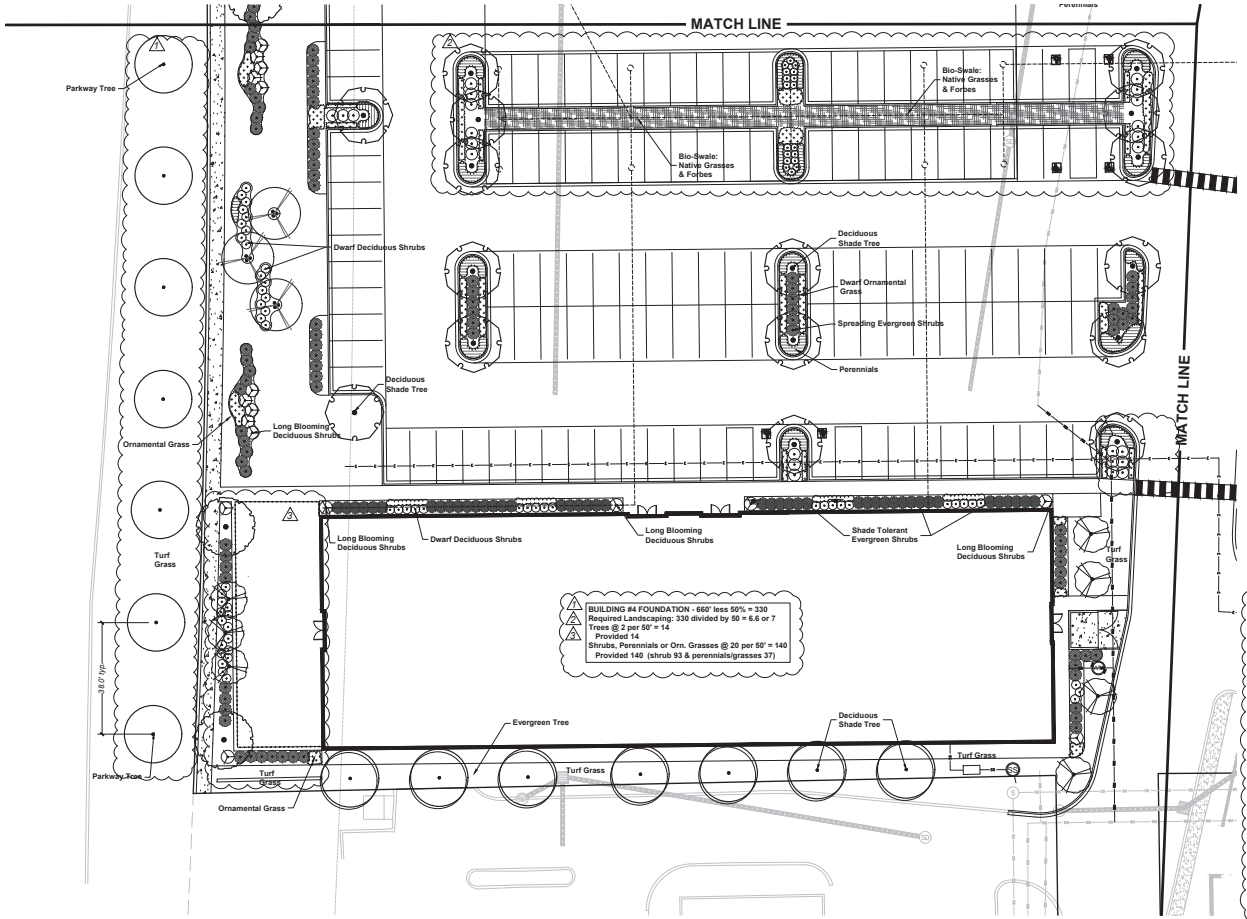
EVERGREEN TREE n.t.s.

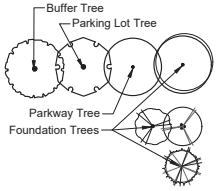


SHRUBS n.t.s.



BED PLANTING DETAIL n.t.s.
(PERENNIALS, ORNAMENTAL GRASSES VINES, GROUNDCOVER & ANNUALS)





LEGEND

- 2.5" - DECIDUOUS SHADE TREES
- 2.0" or 6' - ORNAMENTAL TREES
- 6' - EVERGREEN TREES
- 30" to 36" - DECIDUOUS SHRUBS
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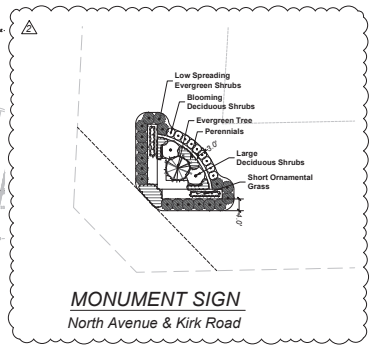
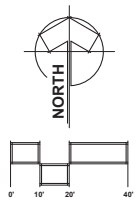
* Dwarf Ornamental Shrubs 18"/#3



MONUMENT SIGN
North Avenue & Kirk Road



REVISIONS

3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

FOX HAVEN SQUARE

502 N. Kirk Road
St Charles, Illinois

SEAL:

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826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
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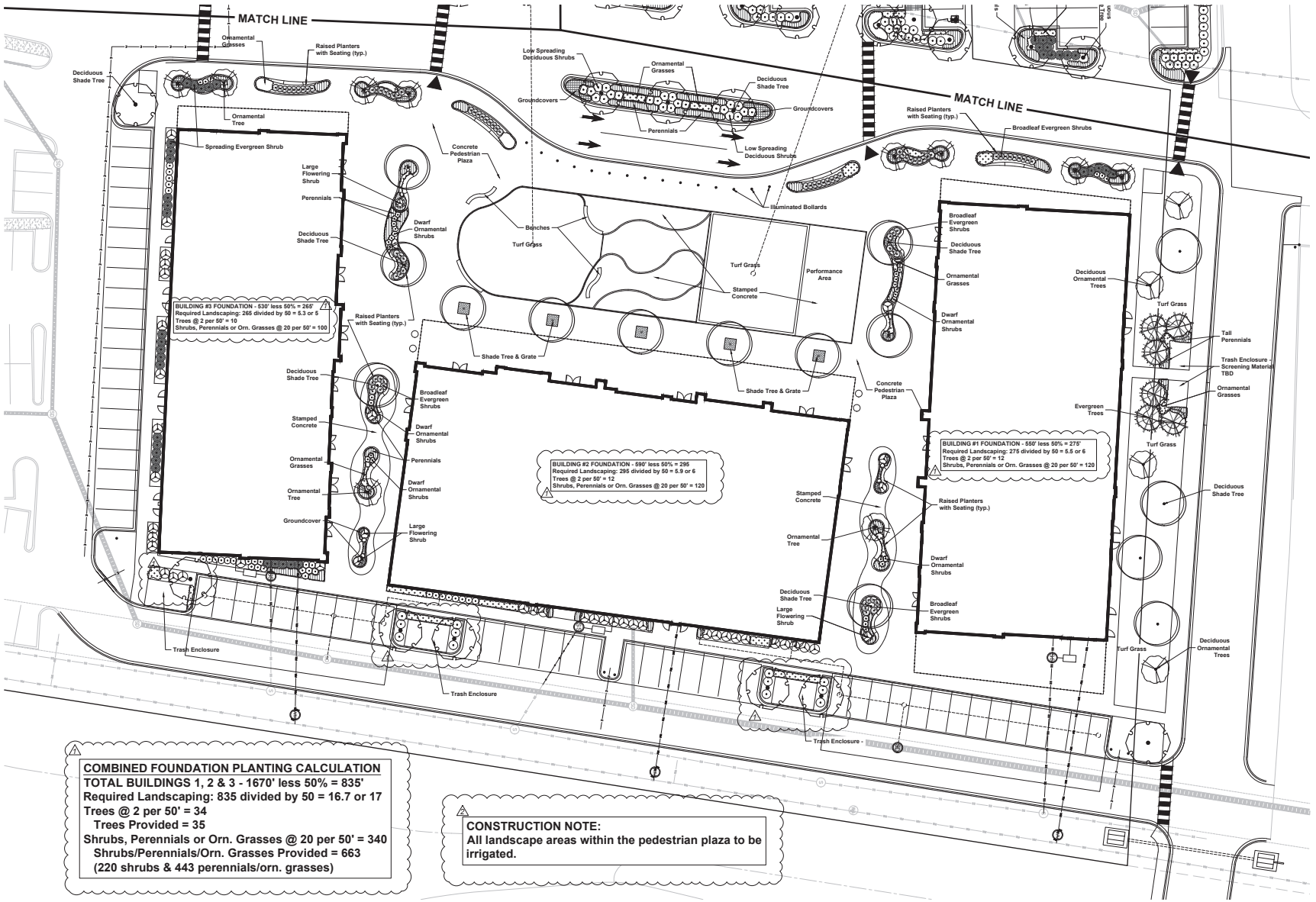
TITLE
PRELIMINARY LANDSCAPE PLAN

PROJECT NO.: 24-248

DATE: 1-19-2024

SCALE: 1"=20'

SHEET
L-2.0



COMBINED FOUNDATION PLANTING CALCULATION
TOTAL BUILDINGS 1, 2 & 3 - 1670' less 50% = 835'
Required Landscaping: 835 divided by 50 = 16.7 or 17
Trees @ 2 per 50' = 34
Trees Provided = 35
Shrubs, Perennials or Orn. Grasses @ 20 per 50' = 340
Shrubs/Perennials/Orn. Grasses Provided = 663
(220 shrubs & 443 perennials/orn. grasses)

CONSTRUCTION NOTE:
All landscape areas within the pedestrian plaza to be irrigated.

Know what's below. Call before you dig.

0' 10' 20' 40'

REVISIONS

3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

FOX HAVEN SQUARE

502 N. Kirk Road
St Charles, Illinois

SEAL:

RANDY F. METZ
No. 157-000423

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TITLE
PRELIMINARY LANDSCAPE PLAN

PROJECT NO.: 24-248
DATE: 1-19-2024
SCALE: 1"=20'

SHEET
L-3.0

PLANT MATERIAL

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes furnishing of all materials, and the performance of all operation in connection with the planting of deciduous & evergreen trees, deciduous & evergreen shrubs, shrub roses, perennials, ornamental grasses, groundcover, bulbs (if any) and annual flowers (if any) in strict conformance with the project specifications and applicable drawings which are subject to the terms and conditions of the Contract.

1.2 GENERAL REQUIREMENTS

All plant material shall comply with the State of ILLINOIS and FEDERAL laws with respect to inspection for plant diseases and insect infestation. An inspection certificate required by law to this effect shall accompany each shipment. The Landscape Architect reserves the right to inspect the plant material at the place of growth but such inspection shall not preclude the right of rejection at the site.

1.3 APPLICABLE STANDARDS

A. *American National Standards for Tree Care Operations*, ANSI A300, American National Standards Institute, 11 West 42nd Street, New York, N.Y. 10036.
B. *American Standard for Nursery Stock*, ANSI Z60.1, American Nursery & Landscape Association, 1000 Vermont Avenue NW, Suite 300, Washington, D.C. 20005.
C. *Hortus Third*, The Staff of the L.J. Bailey Hortorium, 1976, MacMillan Publishing Co., New York.
D. All standards shall include the latest additions and amendments as of the dated of advertisement for bids.

PART 2 - MATERIALS

2.1 GENERAL

The Landscape Architect reserves the right to tag or inspect plants at the nursery but such inspection shall not preclude the right of rejection at the site. Contractor shall furnish and install all plants as shown on the drawing and in the quantities as actually designated on the drawings. The quantities shown on the plant list are included for convenience purposes only.

2.2 NOMENCLATURE

The names of the plants indicated on the drawings conform generally with those accepted in the nursery trade.

2.3 QUALITY AND SIZE

Plants shall have a habit of growth that is normal for the species and shall be sound, healthy, vigorous, and free from insect pests, their eggs or larvae, plant diseases, and injuries. All plants shall be nursery grown under climatic conditions similar to those which exist in the locality of the site for at least two (2) years and equal or exceed the measurements specified in the plant list. They shall be measured before pruning with branches in formal position. All necessary pruning shall be performed only at the time of planting. Trees will not be accepted which have their leaders cut or which have their leaders damaged so that cutting is necessary. Plants larger in size than specified may be used with the approval of the Landscape Architect but the use of larger plants will make no change in the contract price. Requirements for the measurement, branching, quality, balling, and burlapping of plants on the plant list shall follow the Code of Standards (Z60.1-most current edition) by the AMERICAN NURSERY & LANDSCAPE ASSOCIATION, formerly known as the AMERICAN ASSOCIATION OF NURSERYMEN, INC. All plant material with shriveled dry roots or which does not comply with the specifications will be rejected. All shrubs shall be at least twice transplanted and must have a fully developed fibrous root system typical of the stated species. All shrubs must be freshly dug immediately before shipping unless they are containerized. Pre-dug, healed-in plants may be considered only in special cases involving planting during the hot months between the spring and fall planting seasons. Use of such material will be allowed only upon the approval of the Landscape Architect and is subject to his inspection prior to said approval.

2.4 DELIVERIES

The Contractor shall take all precautions that are demanded by good trade practice to insure arrival of the plant material at the stated delivery point in good condition and without injury of any nature. Plants shall be covered properly to prevent drying, transit disease, or injury.

2.5 TEMPORARY STORAGE

Insofar as it is possible, plant material shall be planted on the day of delivery. In the event this is not possible, the Contractor shall protect the unplanted stock from sun and drying winds at all times. All balled and burlapped plants shall be shaded from the sun, have their ball set off the ground and healed in with sawdust, peat, soil or other moisture-holding material and shall be kept moist. Plants should not remain unplanted for longer than three (3) days if in leaf. On-site storage shall be only in area(s) designated by the Owner.

2.6 SUBSTITUTIONS

Substitutions may be permitted only upon submission of written proof that the specified plant is not obtainable locally. Such substitution may be made only upon authorization by the Landscape Architect.

2.7 SELECTION

All plants shall be obtained from nurseries licensed by the State of Illinois and approved by the Landscape Architect. The Landscape Architect reserves the right to accompany the Contractor to the nurseries for the purpose of selecting (tagging) material. Plant sources located outside the State of Illinois must be approved by the Landscape Architect.

2.8 TOPSOIL

Topsoil if needed shall be imported. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:

A. ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
B. pH: No lower than 5.0 nor higher than 8.0.
C. TEXTURE: No more than 25 percent clay.
D. SOLUBLE SALT: No more than 1000 ppm
E. CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.9 MULCH

Mulch shall consist of the following:

A. MUSHROOM COMPOST
Mushroom compost shall be composed of well-rotted cattle or stable manure with an admixture of 15-30% topsoil and shall have been used for the commercial growing of at least one (1) crop of mushrooms.
B. SHREDDED HARDWOOD BARK (general mulching)
Shredded hardwood bark shall consist of finely shredded hardwood bark, free of sticks and leaves.

2.10 FERTILIZER & NUTRIENTS

Fertilizer shall be commercial fertilizer which shall be a complete fertilizer with the following approximate analysis:

A. Shrubs
Woodace (14-3-3) slow-release briquettes or acceptable equivalent approved by Landscape Architect.
B. Roses
1. Woodace (14-3-3) slow-release briquettes
2. Superthrive liquid or acceptable equivalent approved by Landscape Architect.
C. Perennials, Groundcover, Ornamental Grasses & Vines
Osmocote (18-6-12) 8-9 month controlled release, or acceptable equivalent approved by the Landscape Architect.
D. Annual Flowers
Osmocote (14-14-14) 3-4 month controlled release or acceptable equivalent approved by the Landscape Architect.
E. Bulbs
Holland Bulb Booster (9-9-6) or acceptable equivalent approved by the Landscape Architect.
F. Deciduous & Evergreen Trees
No fertilizer required

2.11 TREE WRAPPING MATERIAL

A. Wrap shall be - Breathable synthetic fabric tree wrap. White in color, delivered in 75 mm (3 in.) wide rolls. Specifically manufactured for tree wrapping. Tree wrap shall be "Breathable Fabric Tree Wrap" as manufactured by the Dewitt Company, Inc., Sikeston, MO, or approved equal. Submit manufacture literature for approval.
B. Tape for securing the wrap shall be bio-degradable tape suitable for nursery use and which is expected to degrade in sunlight in less than two (2) years after installation.

2.12 WATER

Potable water shall be supplied by the Owner at no cost to the Contractor by way of an irrigation system, quick coupler system, hose bibs, hydrant meter or a designated fill-up source on site.

PART 3 - EXECUTION

Planting operations shall be conducted under favorable weather conditions during the season stated in the Contract. Before excavations are made the surrounding turf (if existing) shall be covered in a manner that will satisfactorily protect all turf areas that are to be trucked or hauled over and upon which soil is to temporarily stocked. The Contractor shall be responsible for the restoration of all damaged existing turf. All restoration shall be sodded.

3.1 TIME SCHEDULE OF PLANTING OPERATION

Landscaping shall be performed during the season or seasons which are normal for such work as determined by weather conditions and by accepted practice. Planting may be performed under unseasonable conditions without additional compensation, but such work must have the prior approval of the Landscape Architect and/or Owner in writing as to the time of work and methods of operations. Approval to plant under such conditions shall in no way relieve the Contractor form the guarantee provisions of these specifications.

PLANTING SEASON	ACCEPTABLE TIME PERIOD
1. SPRING	a. From time soil is workable to June 15 with the following exception:
1) Bare root materials (if any) shall cease on May 31	
2. FALL	a. Sept. 1 to Nov. 15 with following exceptions:
1) Evergreen Shrub planting to cease Oct. 31	
2) Evergreen Tree planting to cease Oct. 15	
3) Perennial & Ornamental Grass planting to cease Oct. 15	

3.2 WATERING

All plants shall receive a thorough watering immediately after installation. During times of extreme heat, all evergreen and deciduous trees shall receive a minimum of 10 gallons of water per tree per watering up to two (2) additional waterings shall be performed as needed. The use of drip irrigation tree bags are encouraged (e.g., gatorbags). All additional waterings will be performed by the Owner or in accordance with a Change Order per the Supplemental Bid prices for additional watering.

3.3 MAINTENANCE

Maintenance shall be performed by the Contractor as follows:

A. TEMPORARY MAINTENANCE
The Contractor shall be responsible for the total maintenance of all plant material until such a date as all landscape operations have received Preliminary Acceptance. Temporary maintenance shall begin immediately after each plant is installed and shall include up to three (3) waterings, and all necessary cultivation, weeding, pruning, disease and insect pest control, protective spraying, resetting of plants to proper grades or upright position, restoration of damaged planting saucers, and any other procedure consistence with good horticultural practice necessary to insure normal, vigorous, and healthy growth of all work under this Contract. Upon the Preliminary Acceptance of all planted areas, the responsibility for plant maintenance rests solely with the Owner, with the following exceptions.

B. CONTINUED MAINTENANCE
For the duration of the guarantee period the Contractor shall be responsible for the resetting of settled plants, the straightening of plants which are not plumb and the tightening of tree guys (if utilized). All other maintenance is the responsibility of the Owner. However, it is the Contractor's responsibility to occasionally inspect the quality of the Owner's maintenance.

3.4 ACCEPTANCE

A. PRELIMINARY PLANTING ACCEPTANCE
Preliminary planting acceptance shall be given for completed planting operations for the purpose of the Contractor becoming eligible for payment for this portion of the Contract work. In order to obtain Preliminary Acceptance, the Contractor shall notify the Owner and/or Owner's Representative by phone or in writing at the conclusion of all planting operations so that preliminary acceptability by way of a field inspection can be performed. In order for an area to be accepted on a preliminary basis, it shall conform to the following:
1. All plant material shall be in conformance with the Drawings with respect to quality, size, species and location, except those items accepted or revised in the field by the Landscape Architect.
2. All plant material shall be in a healthy condition, as defined under the guarantee requirements stated below in Section 3.14

B. FINAL PLANTING ACCEPTANCE
Final planting acceptance shall be granted after the completion of all replacement operations required fulfilling the guarantee stated below.
On or about the expiration of the one-year (1 year) guarantee, a follow-up inspection will be made by the Owners and/or Owner's Representative to determine replacements required to be made by the Contractor in accordance with the provisions of these specifications. The inspector will document his/her findings in a field report. Upon completion of the replacement program, the Owner and/or Owner's Representative shall conduct an inspection to determine the acceptability of the required replacements. If all is found to be acceptable as defined by Item A above, the Contractor and the General Contractor shall be notified in writing of his final acceptance of work.

3.5 GUARANTEE
The Contractor shall guarantee for a period of one (1) year the replacement of any permanent plant which has died, or is in a dying condition, or which has failed to flourish in such a manner that its usefulness or appearance has been impaired. Any tree with a dead main leader or with a crown which is twenty-five percent (25%) or more dead shall be replaced.
These guarantees shall be in accordance with the following:

A. ONE YEAR PERIOD
The one (1) year period shall begin on the date of Preliminary Acceptance of all plant material.
B. REPLACEMENTS & DAMAGES
The decisions of the Owner and/or Owner's Representative for required replacements shall be conclusive and binding upon the Contractor. The Contractor shall also be responsible for repairing damage to persons and property also caused by defective workmanship and materials.
C. EXCLUSIONS
The Contractor shall not be liable for the replacement of plants which were damaged by animals, by deicing compounds, fertilizers, pesticides or other materials not specified by the Contract documents or not applied by him under his supervision, by relocating or removal by others, by Acts of God, by vandalism or by terrorism.
D. GUARANTEE PERIOD INSPECTION
During the guarantee period, the Contractor shall, from time to time, inspect the watering, cultivation, and other maintenance operations carried on by the Owner with respect to such work, and promptly report to the Owner any methods, practices or operations which he considers unsatisfactory, and not in accord with his interests or good horticultural practices. The failure of the Contractor to so inspect or report shall be construed as an acceptance by him of the Owner's maintenance operations, and he shall not thereafter claim or assert that any defects which may later develop are the result of such methods or practices or operations.

TURF GRASS

PART 1 - GENERAL

1.1 SCOPE OF WORK

The work includes finish grading, furnishing fertilizer, seed and/or sod as specified and performance of all operations in connection with seeding and/or sodding in strict accordance with the applicable Drawings and subject to the terms and conditions of the Contract.

1.2 EQUIPMENT

The Contractor shall provide and maintain equipment suitable for the execution and completion of the work specified in accordance with (IDOT) Standard Specifications. All equipment shall be operated by personnel trained in the operation of such equipment.

PART 2 - PRODUCTS

2.1 TOPSOIL

Topsoil for planting operations shall be obtained from an on-site stockpile generated from site stripping. In the event that none is available, needed topsoil shall be imported from an off-site source. All imported topsoil, used for any portion of the work, shall be fertile, friable, natural loam containing a liberal amount of humus. It shall be relatively free from weeds, large roots, plants, sticks, stones larger than one (1) inch, waste, debris or other extraneous matter. The installing Contractor shall be responsible for rock picking and/or debris removal as needed to meet this specification.

The soil, to be acceptable topsoil, shall meet the following criteria:

1. ORGANIC MATTER: Not less than 1.5 percent no more than 10.0 percent.
2. pH: No lower than 5.0 nor higher than 8.0.
3. TEXTURE: No more than 25 percent clay.
4. SOLUBLE SALT: No more than 1000 ppm.
5. CHEMICAL ACTIVITY: The topsoil (on-site & imported) shall be free from any toxins or chemical residue which could result in any form of plant growth damage.

The Contractor shall provide a soil analysis report submittal containing test results and soil scientist recommendations based on a minimum of one (1) sample taken from each proposed imported topsoil stock pile. The testing shall cover macro nutrients and pH, soluble salts, organic content/mechanical analysis and Bio assay.

2.2 COMMERCIAL FERTILIZER AND DELIVERY

Fertilizer shall be delivered to the site in unopened, original containers, each bearing name and address of the manufacturer, name brand, or trademark, and manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable to use, will not be accepted. Fertilizer shall not have been exposed to weather prior to delivery on the site and after delivery until used. It shall be completely protected at all times and shall not be stored in direct contact with the ground.

A. FERTILIZER STRENGTH
The fertilizer shall be a complete fertilizer containing a minimum basis percentage by weight of the following:
1. PRIOR TO SEEDING AND/OR SODDING 6-24-24
Nitrogen..... 6%
Phosphorous..... 24%
Potash..... 24%
2. AFTER SEEDING AND/OR SODDING 18-5-9
Nitrogen..... 18%
Phosphorous..... 5%
Potash..... 9%
a) One-quarter of the nitrogen shall be in the form of nitrates, one-quarter in the form of ammonia salts, and one-half in the form of organic nitrogen.
b) Available phosphoric acid shall be derived from super-phosphate having a minimum guaranteed analysis of 20% of available phosphate.
c) The potash shall be in the form of sulphate of potash.

The balance of the fertilizer shall be made up of materials usually present in such a product. It shall be free from dust, sticks, sand, stone, or other debris.

2.3 GRASS SEED (if specified)
Grass seed shall be reclaimed seed of the previous season's seed crops. All seed shall meet requirements established by the State and Federal Seed and Weed Controls Laws. The grass seed mixture shall be composed of the following grass seeds mixed in proportions by weight and shall meet or exceed the minimum percentages of purity and germination as indicated.

PROPORTION BY WEIGHT	TYPE OF GRASS
1. CONVENTIONAL TURF GRASS MIX (if specified)	
60%	KENTUCKY BLUEGRASS (blend of 3 cultivars)
30%	PERENNIAL RYEGRASS (blend of 2 cultivars)
10%	CREEPING RED FESCUE
(Apply at 7 lbs./1,000 S.F. for mechanical seeding)	
2. SALT TOLERANT MIX (if specified)	
40%	'FULTS' ALKALI GRASS (PUCCINELLIA DISTANS)
30%	CREEPING RED FESCUE
20%	KENTUCKY BLUEGRASS
10%	PERENNIAL RYEGRASS
(Apply at 5 lbs./1,000 S.F. for mechanical seeding)	

The percentage of hard seed included as a part of the germination percentage of any lot of seed, shall not exceed twenty. Kentucky bluegrass seed shall weigh a minimum of 28 pounds to the nearest measured bushel. Weed seed content shall not exceed 0.25%.

1. PACKING AND MARKETING

All seeds shall be delivered in suitable bags in accordance with standard commercial practice. Each bag shall be tagged or labeled as required by the law of the STATE OF ILLINOIS. The vendor's name shall show on or be attached to each bag together with a statement signed by the vendor showing: a) the kind of seed contained, b) the percentage of purity and germination, c) the percentage of hard seed, if any, d) a statement conforming to the laws of the STATE OF ILLINOIS hereinbefore mentioned showing percentage of weed seeds, if any. Seed which has become wet, moldy, or otherwise damaged will be rejected.

2.4 EROSION CONTROL BLANKET

1. STRAW BLANKET (if specified)
a. S-75 Straw Blanket (North American Green)
b. AEC Premier Straw Blanket (American Excelsior Company)
c. or equivalent

2. STRAW/COCONUT BLANKET (if specified)
a. SC-150 Straw/Coconut Blanket (North American Green)
b. AEC Premier Straw/Coconut Blanket (American Excelsior Company)
c. or equivalent

2.5 HYDROMULCH (if specified)
SoilCover Hydraulic Wood Mulch by Profile distributed by ERO-TEX (866)437-6839

2.6 SOD (if specified)
Sod shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation. It shall be fresh cut, live, nursery grown sod, not less than one and one half (1 1/2) inches thick having well-matted roots. The root zone shall be of good, fertile, natural mineral soil free from stones and debris. Peat sod will not be acceptable. The turf shall contain no bent or quack grass nor any other noxious weed growth. It shall be of firm tough texture having a compact growth of grass. The sod sections shall be standard in size (24 inches wide x 3 feet in length) and each section shall be strong enough to support its own weight and retain its size and shape when suspended vertically from a firm grasp on the upper ten (10%) percent of the section.

Before being cut and lifted, the sod shall have been mowed at least twice with a lawn mower and the final mowing not more than seven days before the sod is cut. Sod which is not placed within 48 hours of cutting shall not be used without the approval of the Owner and/or Landscape Architect.

The Owner and/or Landscape Architect, reserves the right to inspect the sod at the source before cutting and areas that fail to meet with his approval shall not be cut for the purpose of supplying material under the contract. The Owner and/or Landscape Architect shall be permitted to take such samples as he may select. All sod shall be fresh and green when placed. Any sod that is dried out, burned, inferior in quality to said samples, or in any way failing to meet the requirements of these specifications will be rejected and the Contractor shall immediately remove such rejected material from the premises of the project and supply suitable material in its place.

1. **BLUEGRASS SOD shall be a blend of at least three (3) cultivars of Kentucky bluegrass grown on a mineral base.**

2. **SALT SOD (if specified) shall be a blend of Kentucky Bluegrass, 'Fults' Alkalie Grass (Puccinellia Distans), Perennial Ryegrass and other types as approved by the Landscape Architect grown on a mineral base.**

2.7 WATER

The Owner shall provide at no cost, sufficient water for the Contractor to maintain plant materials and seeded and sodded areas in accordance with the requirements of the applicable technical specifications. Potable water shall be supplied by the Owner by way of a permanent underground irrigation system, quick coupler system, hose bibs, fire hydrants or a designated fill-up source for mobile tanks. When water is provided by way of fire hydrants, it shall be the Contractor's responsibility to be completely familiar with all local ordinances concerning the use of this water source. If a meter is required, it is the Contractor's responsibility to obtain, store and return the meter. All fees incurred by the Contractor in obtaining the meter and utilizing the water supply will be reimbursed to him by the Owner.

In the event that the on-site water supply is curtailed or terminated by the Owner or by ordinance during the period the Contract is in effect, or that there is no on-site sources of water, the Contractor shall supply water from off-site in sufficient quantities to complete the job. Compensation for this additional item will be in accordance with a solicited price quote. If authorization to supply off-site water is not given to the Contractor by the Owner, when the Owner is unable to supply the water in sufficient quantities, the Contractor shall not be left responsible for damage to new plantings (plant materials & sod) or failure of seed to germinate and grow caused a direct result of an inadequate water supply.

PART 3 - EXECUTION

3.1 SEED - The accepted seasons for sowing seed in lawn areas shall be defined as follows:

PLANTING SEASONS	SPRING	FALL
Turf grass *	April 1 * to May 31	Aug. 15 to Sept. 30

* or as soon as the soil is free of frost and in a workable condition.

Seeding during other time periods shall require the approval of the Owner and/or Landscape Architect. All sowing of seed shall be completed after all trees and shrubs have been installed, if any.

3.2 SOD - The accepted seasons for laying sod shall be as follows:

1. **SPRING SODDING shall be performed from the time the soil becomes workable and unfrozen sod becomes available to June 15.**
2. **FALL SODDING shall be performed from August 15 to October 31.**

Sodding during the summer season, defined as June 16 to August 14, will be acceptable if the area is served by an operational irrigation system. Sodding after November 1 shall be considered unseasonable and will require the approval of the Landscape Architect or Owner.

3.3 REQUIRED MAINTENANCE

The Contractor shall be responsible for maintaining all newly seeded and sodded areas until such a time as these areas are granted acceptance by the Owner and/or Landscape Architect. Maintenance during this time period shall and consist of watering, mowing, fertilization and herbicide application, as well as any other horticultural practices necessary to establish an acceptable stand of grass.

A. WATERING

1. **The Contractor shall water all newly seeded** areas once immediately upon completion. Additional watering shall be performed as needed in the absence of adequate rainfall. All water should be applied as a spray or dispersion to prevent run-off or damage. The Contractor shall be responsible for watering until turf is established and accepted. If the Owner supplies an in-ground irrigation system, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided.

2. The Contractor shall water all newly installed **sod** immediately. The Contractor shall remain responsible for watering through three (3) applications. If the Owner supplies an in-ground irrigation system included in the scope of these improvements, the Contractor shall be responsible for monitoring the effectiveness of the system and shall report any problems with the system to the Owner immediately, followed up in writing. If the Owner does not provide an irrigation system, then additional watering shall be performed in accordance with the Supplemental Bids where alternate watering prices shall be quoted. If this work item is not included as part of the original Contract, it must be authorized. Compensation shall be in accordance with the Supplemental Bid Prices. If the Owner fails to supply water or authorize supplemental watering the Contractor's warranty for providing an established stand of turf will be voided. Watering after the required three (3) waterings shall be the responsibility of the Owner, or in accordance with authorized supplemental watering.

B. MOWING

1. The Contractor shall mow all **seeded** areas three (3) times. The three (3) mowings shall be performed once the turf has reached a height of three inches (3") and shall maintain the turf at 2-2½". At no time should more than 1/3 of the leaf blade be removed by any mowing.

2. The Contractor shall mow all **sodded** areas once. The one (1) mowing shall be performed once the turf has reached a height of three inches (3"). At no time should more than 1/3 of the leaf blade be removed by any mowing.

C. FERTILIZATION

1. **Seeded** areas after completion of the second required mowing, the Contractor shall apply an 18-5-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs/ac.) to all turf areas using a mechanical spreader and by making two (2) passes at right angles to each other.

2. **Sodded** area after completion of the required mowing, the Contractor shall apply an 18-5-9 commercial fertilizer at the rate of 15 pounds per 1,000 square feet (650 lbs/ac.) to all turf areas using a mechanical spreader and by making two passes at right angles to each other.

D. HERBICIDE

The Contractor shall be responsible for one (1) application of a weed control product no sooner than the second mowing with the areas seeded. The product shall reflect the specific weed problem which may exist.

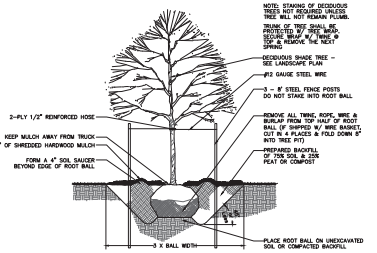
3.4 ACCEPTANCE

Acceptance of seeded areas will be determined by the Owner and/or Landscape Architect.
Acceptance shall be granted upon conformance with the following:
1. Grass shall display a reasonably uniform distribution of grass plants.
2. Grass shall display vigorous growth and be green and healthy in appearance.
3. Grass shall have received the required mowings, fertilization and herbicide application.

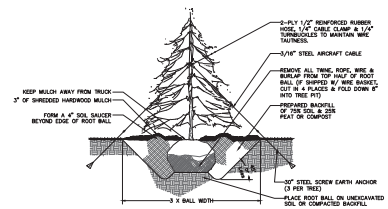
The Contractor shall not be held liable for damage incurred to the seed areas caused by deicing compounds, toxic substances, fertilizers, pesticides and other materials not specified or not applied by him or under his supervision, nor those damages caused by vandalism or acts of nature.

3.5 GUARANTEE

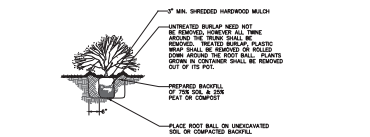
The Contractor shall guarantee the provision of a green, healthy relatively weed free turf at the time of acceptance.



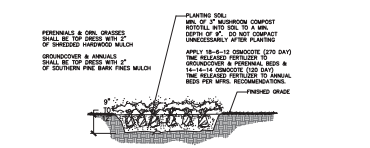
DECIDUOUS TREE n.t.s.

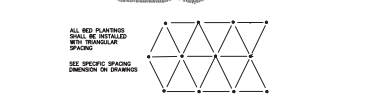


EVERGREEN TREE n.t.s.



SHRUBS n.t.s.





BED PLANTING DETAIL n.t.s.
(PERENNIALS, ORNAMENTAL GRASSES VINES, GROUNDCOVER & ANNUALS)

REVISIONS

3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

If this plan is not 24" x 36" in size, then it is a reproduction that may not be to scale

FOX HAVEN SQUARE

502 N. Kirk Road
St Charles, Illinois

SEAL:

METZ & COMPANY
LANDSCAPE ARCHITECTURE/SITE PLANNING
826 East Maple Street
Lombard, Illinois 60148
PH: 630.561.3903
www.metz-company.com

TITLE
LANDSCAPE SPECIFICATIONS

PROJECT NO.: 24-248

DATE: 1-19-2024

SCALE: N.T.S.

SHEET
L-4.0

CONTAINER PLANTS

Site Preparation

1. The bottom of the stormwater facility(s) shall be free of any actively gowning problematic species prior to plant installation. These problematic species include, but are not limited to: cattails (Typha ssp.), common reed (Phragmities australis), purple loosestrife (lythrum salicaria), and reed canary grass (Phalaris arundinacea). Contractor shall conduct the necessary pre-planting weed control to ensure that the planting zone is free of these species. Planting shall not be authorized if any of the species are actively growing in the basin

Planting Specifications

1. The Contractor shall furnish, transport, and install all plugs in the areas specified on the Landscape Plan
2. Planting activities shall be performed between May 1 and June 15, and after satisfactory site preparation has been completed.
3. The Contractor shall notify the Owner and/or the Owner's Agent 24 hours prior to planting.
4. All plant plugs shall be container grown in open bottom pots and have a minimum shoot heights of 12 inches at the time of planting. Pot dimensions shall be a minimum of 2-inches wide and 3-inches deep for each plug. Smaller pots are not acceptable. Soil saturation shall be maintained for all potted plants until installation. Plants material shall not be provided as dormant root or bare root material (i.e., tubers, rhizomes) or bare root material, except for lilies (if specified).
5. All container plant material shall be inoculated with mycorrhizal fungi.
6. Container plants shall exhibit root growth sufficient to hold all soil intact with removed from container.
7. The container plants shall be protected from depredation by a 2-foot tall chicken wire fence. Wooden 2"x2" stakes shall be placed along each pod at 6-foot intervals along the fence into the substrate. Twine shall be strung over the top if each enclosure to create a web so that larger birds (i.e., geese and ducks) cannot enter the enclosure from above. The Contractor shall replace any plant killed from depredation at no charge.
8. The Contractor shall provide off-site disposal of all planting enclosures during the second growing season.
9. The Contractor shall water all plugs throughout the first growing season as necessary to achieve the performance criteria specified below.
10. The Owner and/or the Owner's Agent shall approve all species substitutions to the designated plug list at least one week prior to planting. Unapproved species delivered to the site shall not be accepted.
11. All plant materials shall be subject to inspection by the Owner and/or Owner's Agent prior to installation. Any plant not in compliance with these specifications or unapproved species substitutions shall not be accepted. The Contractor shall be required to replace unacceptable species within 72 hours from initial inspection. Thus, meeting the plant specifications is mandatory and no exceptions will be allowed.
12. The Contractor shall provide the Owner and/or the Owner's Agent copies of all the plants confirmation forms from the nurseries that provided material.
13. All specified wetland and/or emergent aquatic plugs shall be installed 2 to 3 foot on center in variously shaped pods scattered throughout their respective areas as illustrated on the Landscape Plan.

PRAIRIE SEEDING

Seed Bed Preparation

1. The Contractor shall remove stones, roots and sticks prior to seedbed preparation activities and kill any existing vegetation. All debris shall be disposed of off-site.
2. The Contractor shall prepare the seedbed with a unique rack or harrow to create a smooth level seedbed. The seedbed preparation activities shall reduce clod size to a minimum diameter of 2-inches and eliminate rivulets, gullies, crusting and caking. Working wet soils shall not be conducted. Following these seedbed preparation activities, the ground surface shall have minimum compaction, be smooth and level, and be free of debris to promote good seed to soil contact.

Seeding Specifications

1. The Contractor shall furnish, transport, and install all seed mixes in the areas specified on the Landscape Plan
2. Prairie seeding activities shall be performed after the seedbed has been properly prepared. Spring seeding shall occur between April 15 and June 15. Fall dormant seeding shall be conducted no earlier than November 1 and after the first frost and until the depth exceeds 1 inch.
3. The Contractor shall notify the Owner and/or the Owner's Agent 24 hours prior to planting.
   a. Installation of specified seed mixtures shall be performed using a native seed drill and tractor mounted broadcast spreader. The seeding shall be conducted in the following manner with the drill installation conducted before the broadcast installation:
   i. All of the seed oats, seventy-five percent (75%) by weight of the native grasses and twenty-five (25%) by weight of the forbes shall be installed with a native seed drill. This seed shall be buried to a 1/8-inch depth.
   ii. Following drill seeding the remaining twenty-five percent (25%) and seventy-five percent (75%) of the forbes all shall be sown with a tractor mounted broadcast spreader. Additional oats can be added during the broadcast seeding if needed to improve metering of the seed mix.
4. All seed sources shall be within a 200-mile east-west radius and a 100-mile north-south radius of the site. Seeds shall be true to name and variety and have proper stratification and/or scarification to break dormancy for the appropriate planting seasons. Proof of origin shall be presented to the Owner and/or the Owner's Agent at the site prior to any seeding application. Seed mixes shall be supplied in pounds of Pure Live Seed (PLS). Purity and germination tests no older than twelve (12) months must be submitted for all seed supplied to verify quantities of bulk seed required to achieve the pounds of PLS specified. All species (grasses, sedges and forbes) will be supplied at 100% PLS. Seed not compliant with PLS requirements will be augmented with additional quantities in order to compensate for lack of viability and achieve specified amounts of PLS.
5. Installation of Wetland Seed Mix, Emergent Wetland Seed Mix and/or Stormwater Seed Mix (if specified) shall be performed with a tractor-mounted or ATV mounted broadcast spreader to ensure seed is placed on top of the ground surface (i.e. surface seeding). If the seeding area is too small or wet for a tractor (ATV), seed installation shall be hand-seeded or hydro-seeded using a hydraulic seeder. For hydro-seeding, the seed shall be installed with water only. Hydromulch shall not be mixed with the seed during the seed installation. APPROVAL from the Owner and/or the Owner's Agent is required prior to any hydraulic seeding.
6. The Contractor shall furnish seeds of specified local origin, hardy under the climate conditions at the project site, free of insects and diseases, and having the appearance of health, vigor, and habit normal for the species. Comply with applicable state and federal laws regarding inspections. All regulations applicable to the seed mix and landscape materials shall be followed.
7. The Contractor shall examine the grade, verify the elevations and water levels, observe the conditions under which work is to be performed, and notify the Owner and/or the Owner's Agent of unsatisfactory conditions. Proceeding with the work constitutes acceptance of existing conditions, including current water levels and soil conditions.
8. Seed shall not be sown during high winds or when the seedbed is not in the proper condition for seeding. Prior to starting work, calibrate all seeding equipment and adjust sow seed at the proper seeding rate. Operate equipment to ensure complete coverage of the entire area to be seeded.
9. Prior to installation, the Owner and/or Owner's Agent shall review any species substitutions and reserves the authority to deny use of any species if deemed inappropriate for the site.
10. All seed material shall be subject to inspection by the Owner and/or Owner's Agent prior to installation.
11. Contractor shall provide the Owner and/or Owner's Agent copies of all seed labels.
12. Seeding shall only occur in areas that will received the specified erosion control measures within 48 hours of seeding provided rain is not imminent. If rain is imminent, erosion control measures shall occur on the same day as seeding.

Erosion Control

1. Following seeding erosion control measures shall be completed within all newly seeded areas as shown on the Landscape Plan. If blankets are specified they shall be installed with staples following the manufacturer's specifications.

THREE-YEAR MANAGEMENT PERIOD ACTIVITIES

1. The work consists of the Contractor conducting routine ecological management activities during the three-year management and monitoring period in the naturalized planting areas as shown on the landscape plan to assist the Contractor in meeting required performance standards.
2. During the first two (2) growing seasons of the three-year period the Contractor shall high-mow the vegetation in the Prairie and/or Wet/Mesic Prairie areas several times during the growing season to ensure the vegetation does not exceed eighteen inches (18") in height. A rotary or flail type mower shall be used. During high-mowing, the vegetation shall be cut no lower than 6 to 9 inches so the native seeding are unharmed. Selective weed whipping can also be used if conditions are unfit (i.e., too wet) for a tractor, or if only small isolated areas of vegetation required cutting. In addition, cutting the inflorescence prior to seed set of many biennial species including teasel and sweet clover is an effective control method that can be utilized.
3. The Contractor shall conduct chemical and/or mechanical weed control activities in all of the naturalized seeded areas for a three-year period following planting/seeding. The Contractor shall conduct four annual weed control application periods (total of twelve (12) for the three-year period). The Contractor is responsible to achieve a 95% kill of reed canary grass, purple loosestrife, thistle and common reed and 80% kill of other problematic, nuisance species to successfully complete each of the application periods specified below.
   a. Application Period One (early spring): problematic species such as, but not limited to, reed canary grass, red/white cover, cattails.
   b. Application Period Two (late spring to mid-summer): problematic species such as, but not limited to, reed canary grass, while/yellow sweet cover, cattails, wild carrot, purple loosestrife and common reed.
   c. Application Period Three (mid to late summer): problematic species such as, but not limited to, reed canary grass, ragweed, cattails, purple loosestrife and common reed.
   d. Application Period Four (late summer to early fall): problematic species such as, but not limited to, reed canary grass, red/white cover, common reed.
4. Natural regeneration of cattails in the stormwater management facilities will likely occur following construction. As required by these planting specifications pre-planting weed control will be conducted if any problematic species are present. As for cattails, hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be required. Larger cattails will require herbicide applications. Aggressive cattail control will be required after planting throughout the three-year management period to ensure plant establishment. After planting the hand-wick application method to control cattails shall be required.
5. If permitted, the Contractor shall conduct a prescribed burn in the prairie areas during the third growing season. The Contractor shall obtain all the required burn permits from the Illinois Environmental Protection Agency, City or Village, and local fire protect district and prepare all necessary documents required for the permit including a Burn Plan.
6. The Contractor shall irrigate all plant plugs as needed to achieve the survivorship requirements.
7. The Contractor shall remove and dispose of all planting enclosures during the second year of the management period.

PERFORMANCE CRITERIA

1. Within three (3) months of seed installation, at least 90% of the seeded area, as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be maintained throughout and at the end of the three-year maintenance period for these areas. This standard does not apply to wetland plug areas (if planted).
2. At the end of the second growing season, a minimum of 75% vegetative coverage in the wetland plug area(s) shall be achieved and maintained throughout the end of the three-year maintenance period (if planted).
3. The stormwater management facilities shall not contain any rills greater than four inches (4") deep throughout and at the end of the three-year maintenance period.
4. At the end of the second and third growing seasons, no area greater than 1.0 square meters on slope areas shall be devoid of vegetation.
5. At the end of the second growing season, 30% seed mix presence for the prairie seed mix areas shall be achieved. At the end of the third growing season 50% seed mix presence for the prairie seed mixes shall be achieved.
6. At the end of the third growing season, the top three dominate species based on aerial coverage shall NOT be non-native species, cattail or reed grass
7. Relative coverage (determined by ocular estimation) of cattail shall be less than 10% throughout, and at the end of the three-year maintenance period.
8. Relative coverage (determined by ocular estimation) of common reed, reed canary grass, and loosestrife in aggregate shall be less than 5% throughout, and at the end of the three-year maintenance period.
9. Relative coverage (determined by ocular estimation) of thistle and teasel shall be less than 5% throughout, and at the end of the three-year maintenance period.
10. Plugs (if planted) must achieve 90% survivorship one (1) year from plant installation.

The Contractor shall water plant plugs (if planted) as needed in order to meet the performance criteria. The cost to irrigate is incidental to the contract and shall be included in the Contractor's bid price. The Contractor shall also perform vegetative management for three years following planting as specified under the section "Three-year Monitoring and Reporting Activities' to assist with meeting the Contractor Performance Criteria. If performance criteria are not achieved, Contractor is responsible to conduct additional activities, which may include supplemental seeding, supplemental planting and additional years of vegetation management to rectify areas at no additional cost to the Owner to achieve performance.

BIO-SWALE NATIVE PLANT MIX (or equivalent)

Pizzo Native Plant Nursery, LLC • 10729 Pine Road • Leland, IL 60531 • P: 815.981.8000 • F: 815-498-4406 • www.pizzonursery.com

Dry-Bottom Detention Basin Seed Mix (Mesic-Wet Soils at the Bottom of Basins or Swales)

MIX STATISTICS

Base Mix Without Supplemental Plugs

Average Mix Height	4.0'
Median Mix Height	4.0'
Mix Height Mode (# of Occurrences in Mix)	3.0' (10), 4.0' (9), 5.0' (7), 2.0' (2), 3.5' (2), 6.0' (2), 7.0' (2), 1.0' (1), 1.5' (1), 2.5 (1), 8.0' (1)
Number of Native Species in Mix	38
Lbs/Acre of ***Native Seed***	30.3
Propagules per Square Foot	0.0
Native FQI	30.2
Native Mean C Value	4.9
Native Mean W Value	-0.4
National Wetland Category	Facultative - Equally likely to occur in wetlands or non-wetlands (estimated probability 34 - 66%)

Mix Description: Pizzo's Dry Bottom Detention Basin Mix is designed for sunny areas that flood periodically for short periods of time, ranging from 24-48 hours, but remain mesic-dry for most of the growing season. It is composed of species that tolerate fluctuating water levels & poor water quality, and is ideal for planting in the bottom of dry-bottom detention basins, within the "Bounce Zone" on detention basin slopes, dry-bottom bioswales, large rain gardens, and within open floodplains. This is a medium height prairie with over 56% of seeds typically averaging 3.0' high or less at maturity and about 18% of seeds typically averaging 5.0' high or more. While this mix does provide flowering species from April-October, it is designed to be a bit grass heavy (particularly long-term) with nearly 60% of seeds being grass & sedge species. Pizzo designed the mix in this fashion to ensure excellent erosion control when used in stromwater applications. This mix can be supplemented with the recommended plug list provided below to add diversity, color, and resilience to the long-term health of your naturalized basin.

Grasses, Sedges, & Rushes

ACRONYM	SCIENTIFIC NAME	COMMON NAME	C-Value	W-Value	WETNESS	HEIGHT Min-Max (Typical)	COLOR	BLOOM TIME (A M J J A S O)	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count
ANDGER	*Andropogon gerardii*	BIG BLUESTEM GRASS	5	0	FAC	6-8' (7')	N/A		10,000	64.0000	4.00	13.20%	4.91%
CXBEBB	*Carex bebbii*	BEBB'S OVAL SEDGE	6	-5	OBL	2-4' (3')	N/A		34,000	2.0000	0.13	0.41%	0.52%
CXBREV	*Carex brevior*	PLAINS OVAL SEDGE	4	0	FAC	6"-18" (12")	N/A		29,000	4.0000	0.25	0.82%	0.89%
CXHYST	*Carex hystericina*	PORCUPINE SEDGE	5	-5	OBL	2-4' (3')	N/A		30,000	4.0000	0.25	0.82%	0.92%
CXVULP	*Carex vulpinoidea*	BROWN FOX SEDGE	2	-3	FACW	2-4' (3')	N/A		100,000	8.0000	0.50	1.65%	6.13%
ELEPAL	*Eleocharis palustris*	GREAT SPIKE RUSH	10	-5	OBL	6"-18" (12")	N/A		51,000	4.0000	0.25	0.82%	1.56%
ELYCAN	*Elymus canadensis*	CANADA WILD RYE	4	3	FACU	2-5' (3.5')	N/A		5,200	32.0000	2.00	6.60%	1.28%
ELYVIR	*Elymus virginicus*	VIRGINIA WILD RYE	4	-3	FACW	3-5' (4')	N/A		4,200	48.0000	3.00	9.90%	1.55%
JUNDUD	*Juncus dudleyi*	DUDLEY'S RUSH	4	-3	FACW	1-3' (2')	N/A		3,200,000	1.0000	0.06	0.21%	24.54%
PANVIR	*Panicum virgatum*	SWITCH GRASS	5	0	FAC	3-5' (4')	N/A		14,000	80.0000	5.00	16.49%	8.59%
SCHSCO	*Schizachyrium scoparium*	LITTLE BLUESTEM GRASS	5	3	FACU	2-3' (3')	N/A		15,000	64.0000	4.00	13.20%	7.36%
SORNUT	*Sorghastrum nutans*	INDIAN GRASS	5	3	FACU	3-7' (6')	N/A		12,000	16.0000	1.00	3.30%	1.47%
									Grass/Sedge Subtotals		20.44	67.42%	59.72%

Flowers & Other Broadleaves

ACRONYM	SCIENTIFIC NAME	COMMON NAME	C-Value	W-Value	WETNESS	HEIGHT Min-Max (Typical)	COLOR	BLOOM TIME (A M J J A S O)	SEEDS/OZ	OZ/ACRE	LB/ACRE	% OF MIX by Weight	% OF MIX by Seed Count
ALLCER	*Allium cernuum*	NODDING WILD ONION	7	3	FACU	1-2' (1.5')	Pink		7,600	4.0000	0.25	0.82%	0.23%
ASCINC	*Asclepias incarnata*	SWAMP MILKWEED	4	-5	OBL	3-5' (4')	Magenta		4,800	24.0000	1.50	4.95%	0.88%
CHAFAS	*Chamaecrista fasciculata*	PARTRIDGE PEA	5	3	FACU	1-3' (2')	Yellow		2,700	16.0000	1.00	3.30%	0.33%
CORTRP	*Coreopsis tripteris*	TALL COREOPSIS	5	0	FAC	5-8' (7')	Yellow		14,000	6.0000	0.38	1.24%	0.64%
DESCAA	*Desmodium canadense*	SHOWY TICK TREFOIL	4	3	FACU	3-6' (5')	Purple		5,500	4.0000	0.25	0.82%	0.17%
ECHPUR	*Echinacea purpurea*	PURPLE CONEFLOWER	3	5	UPL	2-5' (4')	Purple		6,600	16.0000	1.00	3.30%	0.81%
ERYYUC	*Eryngium yuccifolium*	RATTLESNAKE MASTER	9	0	FAC	2-5' (4')	White		7,500	12.0000	0.75	2.47%	0.69%
EUPPER	*Eupatorium perfoliatum*	COMMON BONESET	4	-5	OBL	3-6' (4')	White		160,000	0.5000	0.03	0.10%	0.61%
EUTGRA	*Euthamia graminifolia*	COMMON GRASS-LEAVED GOLDENROD	4	-3	FACW	2-4' (3')	Yellow		350,000	1.0000	0.06	0.21%	2.68%
EUTMAC	*Eutrochium maculatum*	SPOTTED JOE PYE WEED	4	-5	OBL	4-7' (5')	Pink		95,000	2.0000	0.13	0.41%	1.46%
HELAUT	*Helenium autumnale*	SNEEZEWEED	5	-3	FACW	2-5' (4')	Yellow		130,000	3.0000	0.19	0.62%	2.99%
KUHEUC	*Kuhnia eupatorioides corymbulosa*	FALSE BONESET	6	5	UPL	2-5' (3')	White		32,000	4.0000	0.25	0.82%	0.98%
MONFIS	*Monarda fistulosa*	WILD BERGAMOT	4	3	FACU	3-5' (4')	Purple		70,000	4.0000	0.25	0.82%	2.15%
PENDIG	*Penstemon digitalis*	FOXGLOVE BEARD TONGUE	4	0	FAC	2.5-5' (3.5')	White		130,000	4.0000	0.25	0.82%	3.99%
PYCVIR	*Pycnanthemum virginianum*	COMMON MOUNTAIN MINT	5	-3	FACW	1-4' (3')	White		220,000	2.0000	0.13	0.41%	3.37%
RUDHIR	*Rudbeckia hirta*	BLACK-EYED SUSAN	1	3	FACU	2-3' (2.5')	Yellow		92,000	8.0000	0.50	1.65%	5.64%
RUDSUB	*Rudbeckia subtomentosa*	SWEET BLACK-EYED SUSAN	9	3	FACU	3-6' (5')	Yellow		43,000	4.0000	0.25	0.82%	1.32%
RUDTRI	*Rudbeckia triloba*	BROWN-EYED SUSAN	3	3	FACU	4-6' (5')	Yellow		34,000	3.0000	0.19	0.62%	0.78%
SILLAC	*Silphium laciniatum*	COMPASS PLANT	5	5	UPL	6-9' (8')	Yellow		660	1.0000	0.06	0.21%	0.01%
SOLRID	*Solidago riddellii*	RIDDELL'S GOLDENROD	7	-5	OBL	2-4' (3')	Yellow		93,000	2.0000	0.13	0.41%	1.43%
SOLRIG	*Solidago rigida*	STIFF GOLDENROD	4	3	FACU	3-6' (4')	Yellow		41,000	1.5000	0.09	0.31%	0.47%
SYMNOV	*Symphyotrichum novae-angliae*	NEW ENGLAND ASTER	4	-3	FACW	4-6' (5')	Purple		65,000	6.0000	0.38	1.24%	2.99%
THADAD	*Thalictrum dasycarpum*	PURPLE MEADOW RUE	5	-3	FACW	4-7' (6')	Cream		11,000	4.0000	0.25	0.82%	0.34%
VERFAS	*Vernonia fasciculata*	COMMON IRONWEED	5	-3	FACW	4-6' (5')	Purple		24,000	6.0000	0.38	1.24%	1.10%
VERHAS	*Verbena hastata*	BLUE VERVAIN	4	-3	FACW	4-7' (5')	Blue		93,000	4.0000	0.25	0.82%	2.85%
ZIZAUR	*Zizia aurea*	GOLDEN ALEXANDERS	7	0	FAC	2-4' (3')	Yellow		11,000	16.0000	1.00	3.30%	1.75%
									Broadleaf Subtotals		9.88	32.58%	40.28%
									SEED MIX TOTALS		30.31	100.00%	100.00%

Recommended Plug Species to Supplement Dry Bottom Detention Basin Seed Mix

ACRONYM	SCIENTIFIC NAME	COMMON NAME	C-Value	W-Value	WETNESS	HEIGHT Min-Max (Typical)	COLOR	BLOOM TIME (A M J J A S O)	PLUGS/FLAT	FLATS/ ACRE	PLUGS/ ACRE	PLUGS/ SF	% OF TOTAL PLUGS
ELEACI	*Eleocharis acicularis*	NEEDLE SPIKE RUSH (5)	2	-5	OBL	6-12" (8")	N/A		38	43.0	1,634.00	0.04	8.41%
ELEERY	*Eleocharis erythropoda*	RED-ROOTED SPIKE RUSH (5)	2	-5	OBL	2-4' (3')	N/A		38	20.0	760.00	0.02	3.91%
FILRUB	*Filipendula rubra*	QUEEN OF THE PRAIRIE (1, 2, 5)	10	-5	OBL	4-6' (5')	Pink		38	43.0	1,634.00	0.04	8.41%
GALBOR	*Galium boreale*	NORTHERN BEDSTRAW	7	0	FAC	1.5-3' (2')	White		38	20.0	760.00	0.02	3.91%
GENAND	*Gentiana andrewsii*	BOTTLE GENTIAN (1, 2, 4)	8	-3	FACW	1-3' (2')	Blue		38	20.0	760.00	0.02	3.91%
HEURIC	*Heuchera richardsonii*	PRAIRIE ALUM ROOT (1, 2)	8	3	FACU	1-3' (2')	Green		38	20.0	760.00	0.02	3.91%
LIAPYC	*Liatris pycnostachya*	PRAIRIE BLAZING STAR (1, 2)	8	0	FAC	1-2' (1.5')	Magenta		38	86.0	3,268.00	0.08	16.83%
LIASPI	*Liatris spicata*	MARSH BLAZING STAR (1, 2)	6	0	FAC	3-5' (4')	Purple		38	86.0	3,268.00	0.08	16.83%
PHYVIR	*Physostegia virginiana*	OBEDIENT PLANT (2, 3)	6	-3	FACW	3-5' (4')	Purple		38	86.0	3,268.00	0.08	16.83%
ROSSET	*Rosa setigera*	ILLINOIS ROSE (1, 2, 3, 5)	7	3	FACU	5-12' (6')	Pink		1	20.0	20.00	0.00	0.10%
RUDFUS	*Rudbeckia fulgida var. sullivantii*	SHOWY BLACK-EYED SUSAN (5)	8	-5	OBL	2-4' (3')	Yellow		1	20.0	20.00	0.00	0.10%
VERVIR	*Veronicastrum virginicum*	CULVER'S ROOT (1)	7	0	FAC	2-5' (3')	White		38	86.0	3,268.00	0.08	16.83%
										550.0	19,420.00	0.45	100.00%

SUPPLEMENTED MIX STATISTICS

Base Seed Mix Including Supplemental Plugs

Number of Native Species in Mix	50
Native FQI	37.5
Native Mean C Value	5.3
Native Mean W Value	-0.7
National Wetland Category	Facultative Wetland / Facultative - Usually occur in wetlands (estimated probability 67 - 99%), but occasionally found in non-wetlands (estimated probability 34 - 66%)

Some species are not appropriate for inclusion into a seed mix, however they may be very desirable to have as part of the permanent plant matrix because of their ecological, habitat, and/or aesthetic value. The plug species listed above are appropriate for supplementing this seed mix. Following are the common reasons for not including these species within the seed mix: 1-Does not germinate well from seed in the field, 2-Seed is very expensive, 3-Low number of seeds per ounce, 4-Requires specialized microclimate, 5-Seed is not commercially available or is only available in small quantities

Notes:

1.) Pizzo recommends installing a Mycorrhizal Inocculant with the above seed mix at 40 lbs/acre
2.) For spring planting, Pizzo recommends installing a cover crop of Seed Oats (Avena sativa) with the above seed mix at 40 lbs/acre
3.) For fall planting, Pizzo recommends installing a cover crop of ReGreen (a Winter Wheat x Wheatgrass Sterile Hybrid) with the above mix at 50 lbs/acre
4.) **At no time should Annual nor Perennial Rye (Lolium multiflorum or perenne) be utilized as a cover crop**

REVISIONS

3	Building #4 West Patio Added	7-1-24
2	St. Charles Review #2	6-24-24
1	St. Charles Review #1	4-18-24

FOX HAVEN SQUARE

502 N. Kirk Road
St Charles, Illinois

SEAL:

RANDY F. METZ no. 157-000422 LANDSCAPE ARCHITECT

METZ & COMPANY
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TITLE
BIO-SWALE SPECIFICATIONS

PROJECT NO.: 24-248
DATE: 1-19-2024
SCALE: N.T.S.

SHEET
L-5.0

FOX HAVEN SQUARE

ST. CHARLES, ILLINOIS

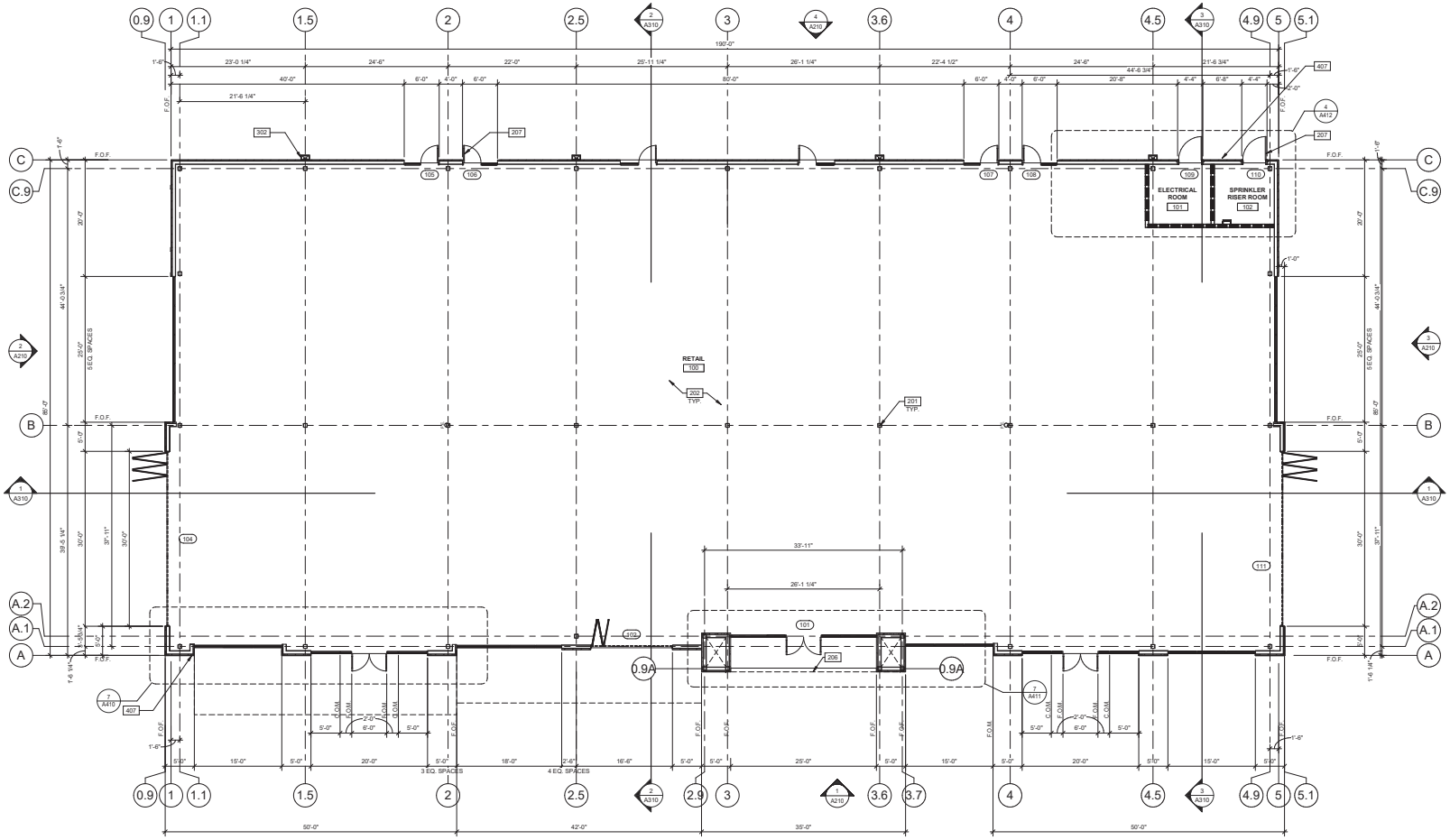
CHI23-0124-00
JULY 1, 2024

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

CONCEPTUAL SITE PLAN

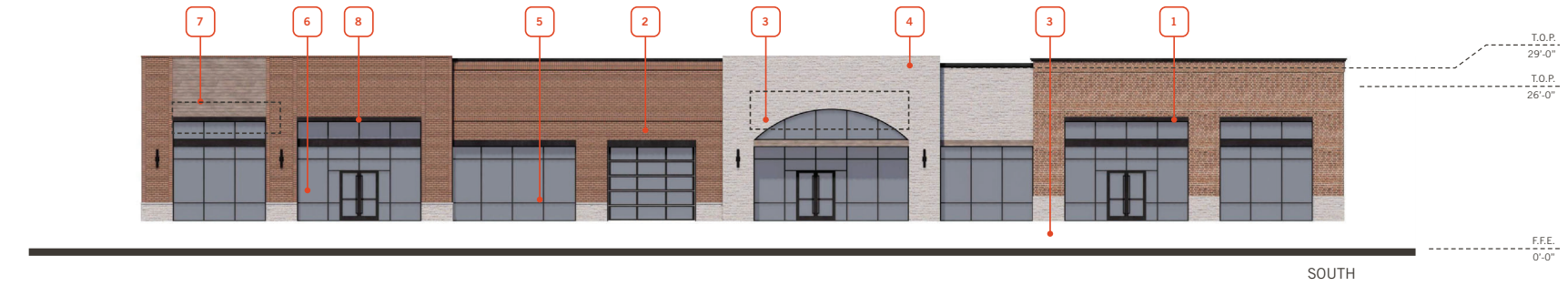
WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024



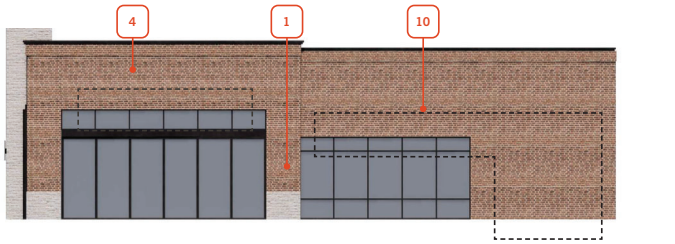
BUILDING 1 FLOOR PLAN

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

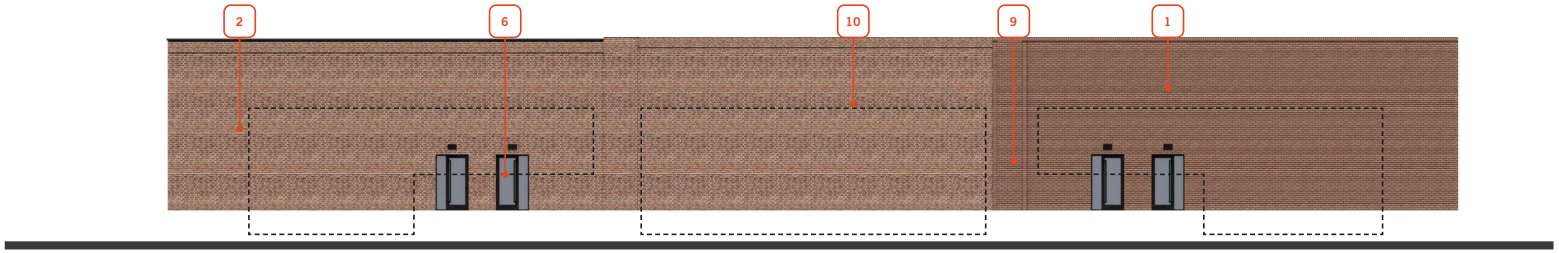


SOUTH

WEST



EAST



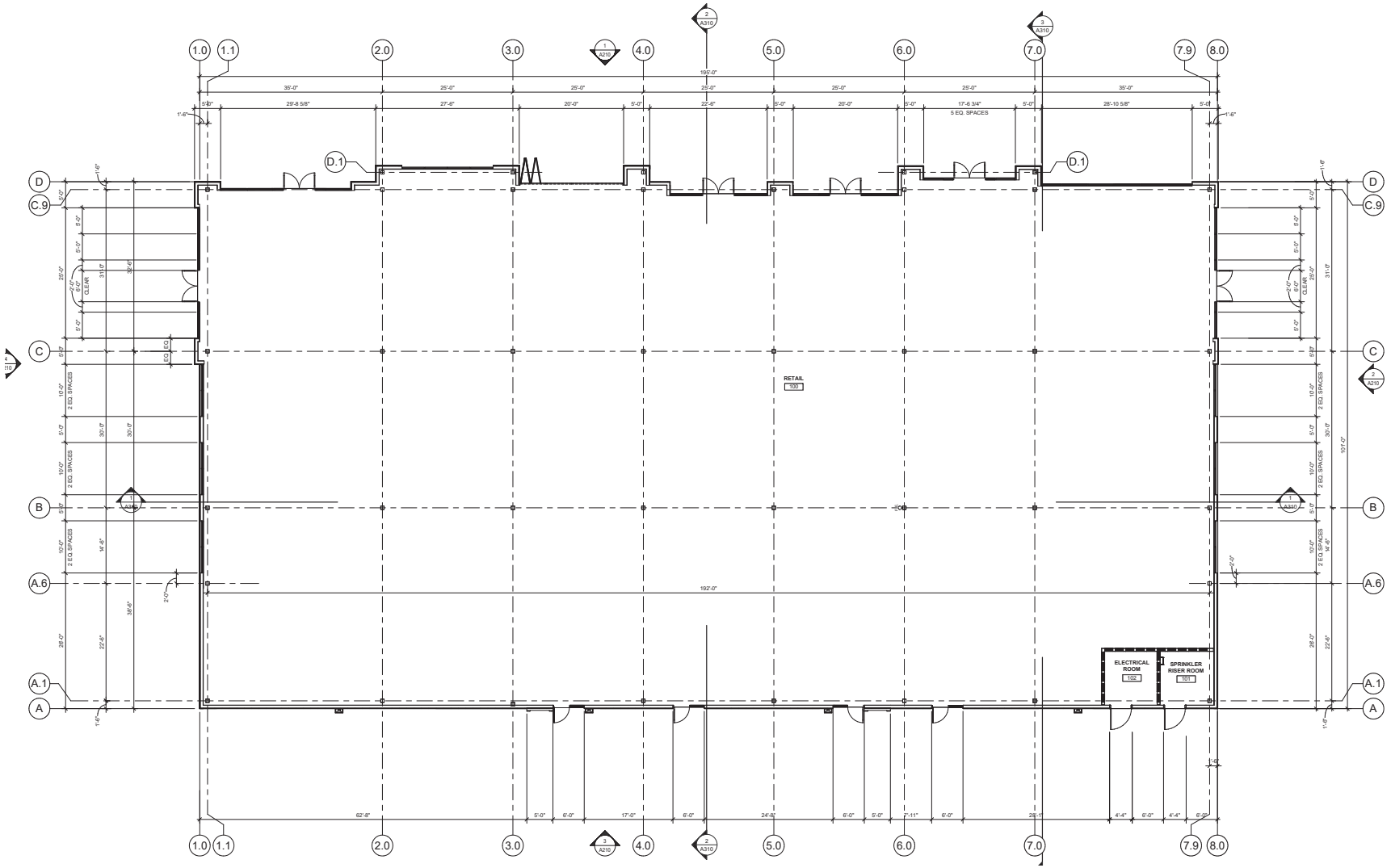
NORTH

KEYNOTES

1	BRICK - MIDDLE TONE	4	ALUMINUM PRE-FINISHED COPING DARK FINISH	7	POTENTIAL LOCATION FOR SIGNAGE	10	POTENTIAL LOCATION(S) FOR ART MURAL
2	BRICK - DARK TONE	5	ALUMINUM STOREFRONT DARK FINISH	8	WOOD VENEER ACCENT		
3	STACKED STONE VENEER	6	EXTERIOR LIGHTING	9	BRICK EXPRESSION		

BUILDING 1 EXTERIOR ELEVATIONS

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069



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BUILDING 2 FLOOR PLAN

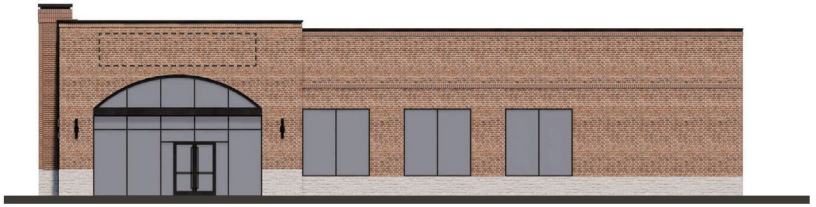
WARE MALCOMB

STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

WEST

NORTH



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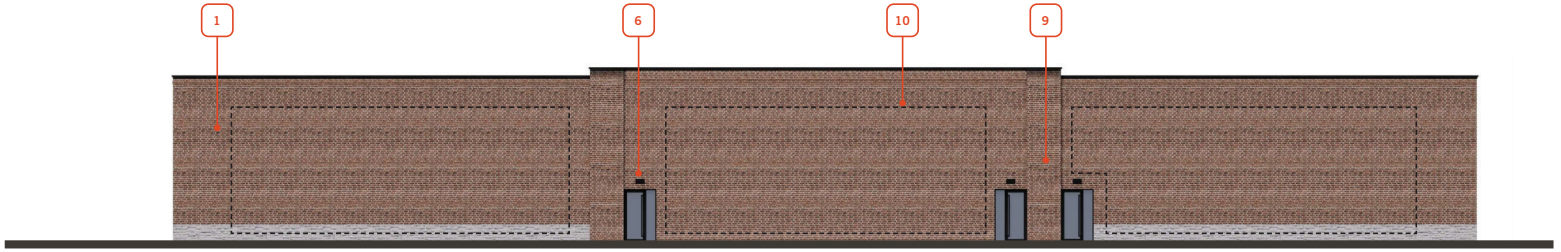


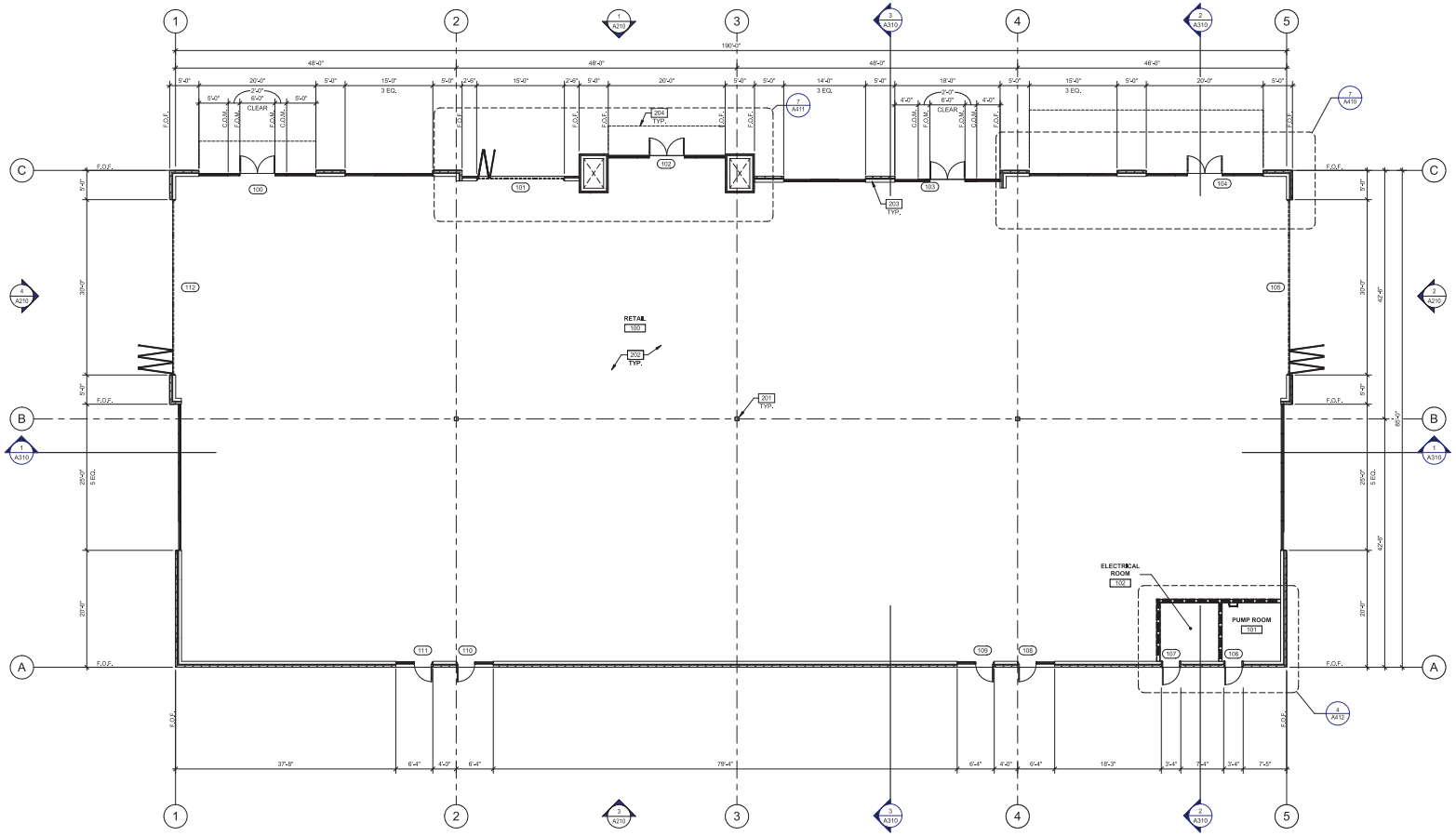
EAST

KEYNOTES

1	BRICK - MIDDLE TONE	4	ALUMINUM PRE-FINISHED COPING DARK FINISH	7	POTENTIAL LOCATION FOR SIGNAGE	10	POTENTIAL LOCATION(S) FOR ART MURAL
2	BRICK - DARK TONE	5	ALUMINUM STOREFRONT DARK FINISH	8	WOOD VENEER ACCENT		
3	STACKED STONE VENEER	6	EXTERIOR LIGHTING	9	BRICK EXPRESSION		

BUILDING 2 EXTERIOR ELEVATIONS

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069



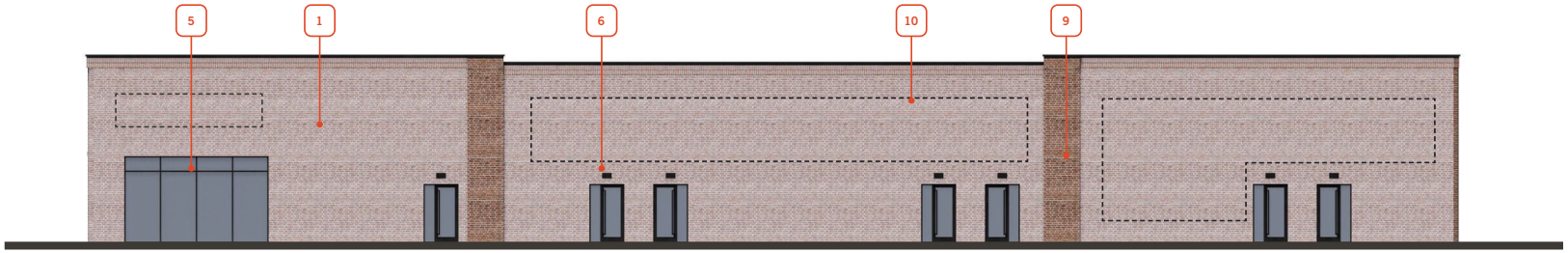
BUILDING 3 FLOOR PLAN

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

NORTH

EAST

WEST



SOUTH

KEYNOTES

1	BRICK - MIDDLE TONE	4	ALUMINUM PRE-FINISHED COPING DARK FINISH	7	POTENTIAL LOCATION FOR SIGNAGE	10	POTENTIAL LOCATION(S) FOR ART MURAL
2	BRICK - DARK TONE	5	ALUMINUM STOREFRONT DARK FINISH	8	WOOD VENEER ACCENT		
3	STACKED STONE VENEER	6	EXTERIOR LIGHTING	9	BRICK EXPRESSION		

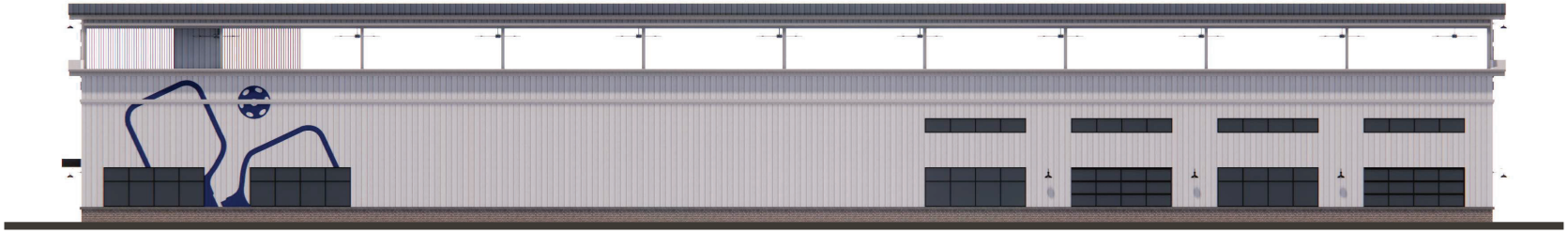
BUILDING 3 EXTERIOR ELEVATIONS

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

NORTH

EAST

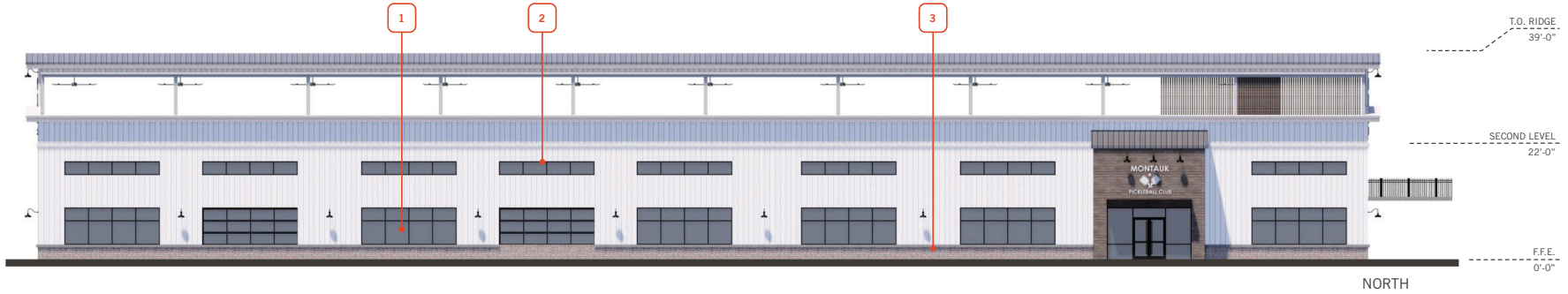
WEST



SOUTH

KEYNOTES

1. **ALUMINUM STOREFRONT**
   WHITE MULLIONS
2. **PREFINISHED METAL PANEL**
   LIGHT/WHITE
3. **STACKED STONE VENEER**



NORTH

EAST

WEST

SOUTH

KEYNOTES

1. **ALUMINUM STOREFRONT**
   WHITE MULLIONS
2. **PREFINISHED METAL PANEL**
   LIGHT/WHITE
3. **STACKED STONE VENEER**

BUILDING 4 EXTERIOR ELEVATIONS - OPTION B

NORTHWEST AERIAL PERSPECTIVE

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

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SOUTHWEST AERIAL PERSPECTIVE

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

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SOUTH PERSPECTIVE FROM MAIN STREET

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STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

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PERSPECTIVE: DROP OFF/VALET AREA

WARE MALCOMB
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07.01.2024

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

SOUTHEAST PERSPECTIVE: BUILDING 1

WARE MALCOMB
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07.01.2024

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

PERSPECTIVE: LOOKING EAST @ B2

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STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

SOUTH PERSPECTIVE: BUILDING 2

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STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

PERSPECTIVE: NORTHWEST BUILDING 3

PERSPECTIVE: NORTHEAST BUILDING 4

WARE MALCOMB
STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

PERSPECTIVE: NORTHEAST BUILDING 4A

WARE MALCOMB

STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

PERSPECTIVE: NORTHEAST BUILDING 4B

WARE MALCOMB

STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

PERSPECTIVE: SOUTHWEST BUILDING 4A

WARE MALCOMB

STATE OF ILLINOIS DESIGN FIRM REGISTRATION NO. 194-004069

07.01.2024

FOX HAVEN SQUARE - ST. CHARLES, IL CHI23-0124-00

PERSPECTIVE: SOUTHWEST BUILDING 4B

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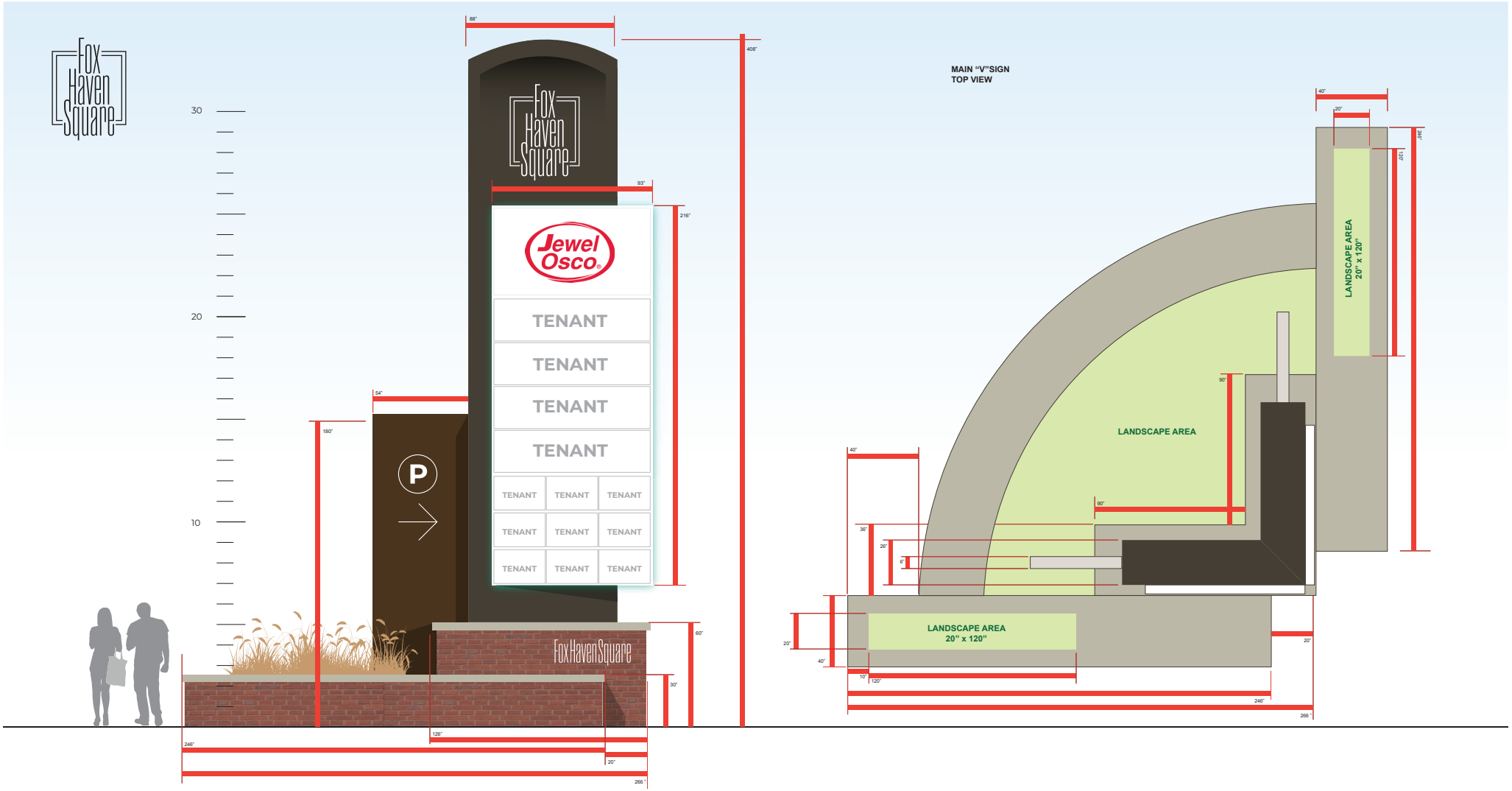
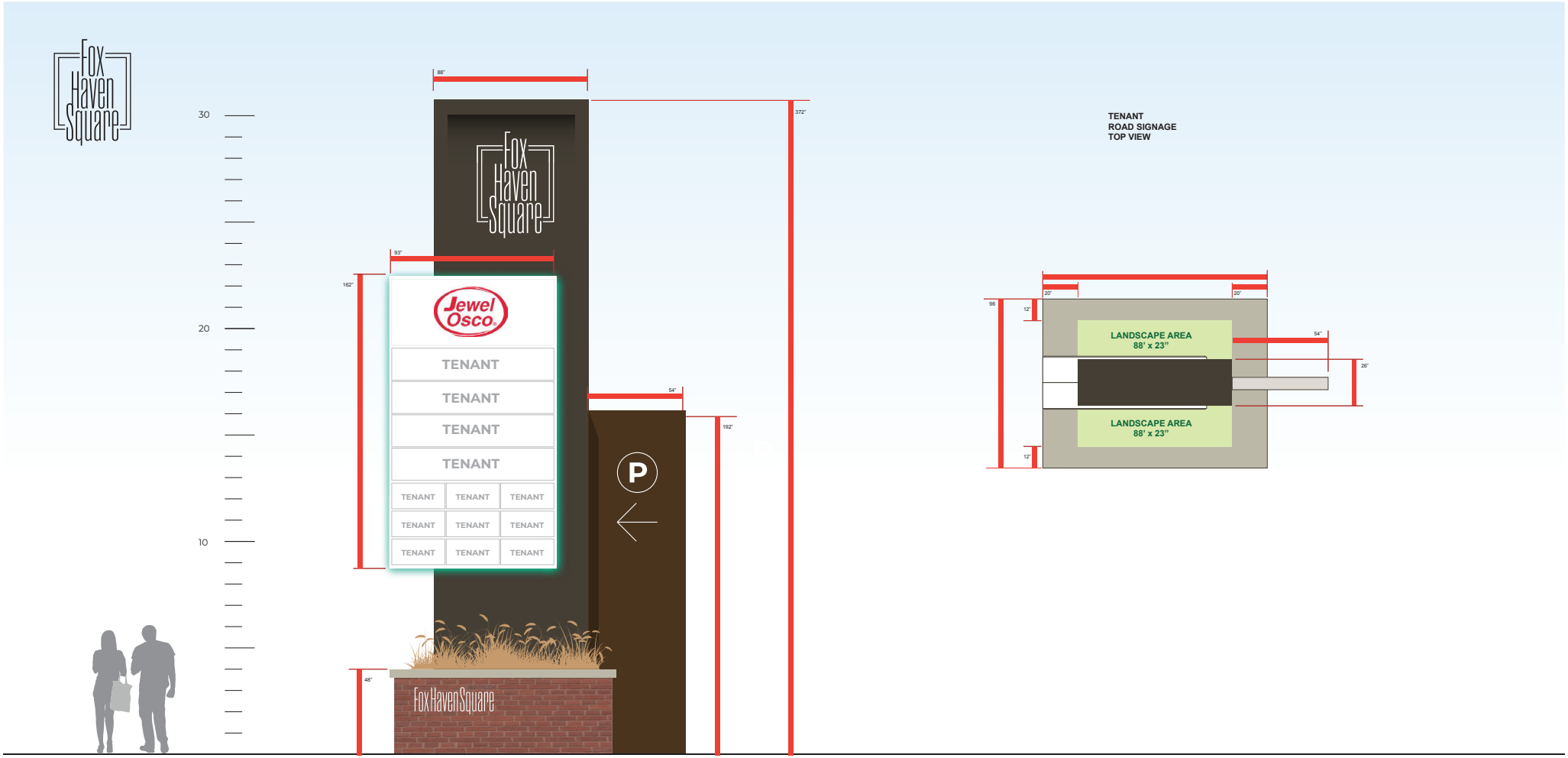
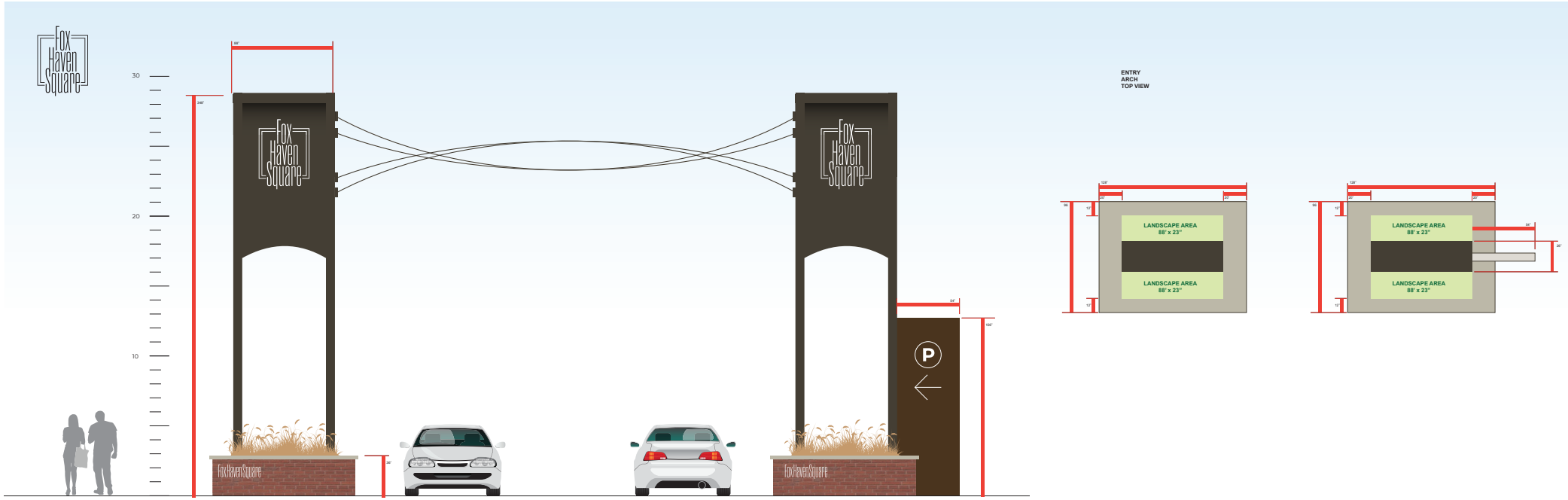

Fox Haven Square
30
20
10
88"
408"
93"
216"
54"
180"
60"
30"
126"
246"
20"
266"
Jewel Osco
TENANT
TENANT
TENANT
TENANT
TENANT TENANT TENANT
TENANT TENANT TENANT
TENANT TENANT TENANT
P
Fox Haven Square
MAIN "V" SIGN
TOP VIEW
40"
20"
360"
120"
LANDSCAPE AREA
20" x 120"
90"
LANDSCAPE AREA
90"
36"
26"
6"
40"
LANDSCAPE AREA
20" x 120"
20"
40"
10"
120"
246"
266"



TENANT
ROAD SIGNAGE
TOP VIEW



ENTRY
ARCH
TOP VIEW